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BLUE JAY

Volume 63 Number 3 September 2005

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Common names are used for birds, mammals and butterflies. Bird names follow the Checklist of North American Birds by the American Ornithologists' Union (7th edition, 1998); mammal names, Mammal Species of the World by Wilson and Reeder; butterfly names, The Butterflies of Canada by Layberry *et al.* For other groups, both scientific and common names are included.

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COVERS: Front - Young Cedar Waxwings by William P. Saban, submitted to the Junior Naturalist section of Blue Jay when he was 14 and published in Vol. 20, Number 4, page 169. See article in this issue and page 126 for the story that William submitted with his waxwing drawing.

Back - Adult female Prairie Rattlesnake with recently born young near the entrance to their den north of Leader, SK, on October 2, 2004. Photograph by Alexandra Reid. See article on page 139.

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JUNIOR NATURALISTS' SECTION IN *BLUE JAY*, 1954 - 1972

MARY I. HOUSTON, 863 University Drive, Saskatoon SK S7N 0J8

In the 1953 fall issue of *Blue Jay,* Elizabeth Hubbard of Grenfell proposed a contest for students to encourage their interest in nature observation. In 1954 the first "Nature's School house–Boys' and Girls' Section" appeared. First, second and third prizes for the best contributions were given following each issue. Donated by individual society members, prizes consisted initially of a choice of any *Peterson's Field Guide* or *Wherry's Flower Guide.* The grand prize for the first seven issues, a $50 camera donated by Dick Bird of Regina, was won by Wilma Aim for her article about the muskrats on her farm near Bredenbury.[1] These were valuable prizes for that time. Later winners had an added choice of *Photography for Teenagers,* a subscription to *Canadian Nature,* or a three-year subscription to *Blue Jay.* By 1963, the prize was simply a one-year subscription to *Blue Jay.* Prizes were last given in 1965.

In 1957, Joyce Dew (Figure 1) from the Saskatchewan Museum of Natural History became the editor of the youth section. In 1961, the name of the section was changed to Junior Naturalists. Joyce married Adam Deutscher in 1962 and left the employ of the museum in 1963 to become a high school art teacher, but continued as an Associate Editor in charge of youth submissions until 1970. In 1971 and 1972, junior contributions continued in diminishing numbers, but were no longer in a separate section; the age of the some contributors was still provided.

Children birdwatching with Joyce Dew in Regina Waterfowl Park *Fred G. Bard*

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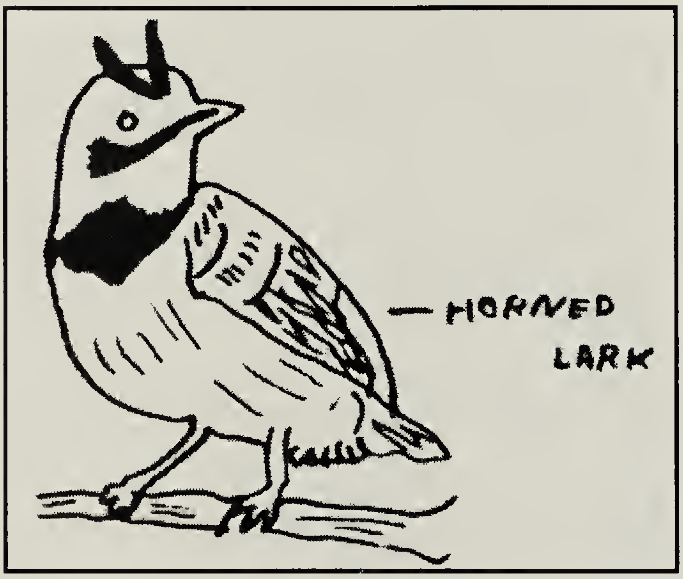
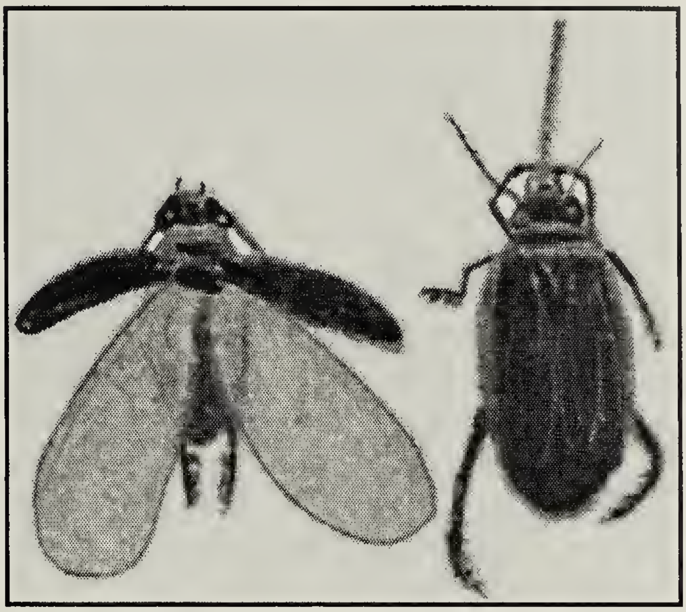
Between 1954 and 1972, over 500 short articles, drawings, poems and letters were contributed by 380 young people from 165 locations. Most contributed only one item, but over 50 contributed two or more. The title, “honour naturalist” for “juniors who contribute more or less regularly”[2] was given to two people: Bohdan Pylypec of Yellow Creek who had 18 items printed, and Brian Irving of Kelvington with 17. Rosemary Nemeth of Yellow Creek had 13.

Over the years, the contributors ranged from grade 1 students, aged six years, to high school students and two recent high school graduates. The most common ages (77%) for initial submissions were between 11 and 14, usually in grades 5 to 7. Interest came from a wide geographic area, indicating the extent of *Blue Jay* subscriptions. Several hundred schools benefitted from bulk purchases by the regional school boards. Contributions came from 325 Saskatchewan students from 128 localities (including now-defunct post offices such as Adams and Hearne; rural schools qualified as separate localities prior to universal ownership of cars and trucks), 26 from Manitoba and 17 from Alberta, as well as from outside the Canadian prairies: British Columbia (3), Ontario (3), NorthWest Territories (2), Missouri (1), Montana (1), Wisconsin (1) and two items, one a prize-winner, from a lad in London, England. Yellow Creek school, with Bryan Isinger as teacher, submitted contributions from 46 juniors. (See the list at the end of this article).



Drawing by Dan Pawlivsky, age 10, Square Hill, Sask.



Koko, the Predacious Diving Beetle, by June Martinsen

Schools were stimulated to form nature clubs. These included clubs at Simpson School (run by Miss Pauline Summers) in Yorkton, Lonsdale School near Loon Lake, Omand School near Kinistino, Kitzman School near Rhein, the coincidentally-named Blue Jay School near Carrot River, Thunderbird School near Benito, Manitoba, and the “Seagull club” at Meath Park. Each of these clubs sent in accounts of their projects and nature hikes. There was a Junior Exhibit on display at the Saskatchewan Museum of Natural History in 1962. The Brandon Juniors contributed an annual report on bird box success from 1963 to 1976, the final two years submitted by Mrs. Lane after Jack Lane’s death.

As one would expect, some youngsters wrote about topics such as a special pet, important to them but of little significance in a wider sense.

Others reported natural history observations of lasting value: the first sighting of a Steller's Jay in the Saskatoon area on October 29, 1961;[3] a Ruffed Grouse and a Mallard nest only two feet apart near Kamsack on May 3, 1958;[4] the first white phase Gyrfalcon in the Yorkton-Duck Mountain area on March 29, 1959,[5] and a Whip-poor-will seen near Hudson Bay in 1965.[6]

Drawing by Irene Pylypec, Yellow Creek

Yellow Lady's Slipper

Names of students who, from 1954 - 1970, had articles published in the Boys' and Girls' Section and the Junior Naturalists section, or whose unpublished articles received mention, are listed in the following Appendix. Locations are listed alphabetically within regions, which are listed in order of the number of people submitting from each. An asterisk beside a name indicates those students who also participated in Saskatchewan CBCs.

1. AIM, W. Furry Boarders. *Blue Jay* 12(3): 15-17.

2. DEW, J. 1965. Comments and prize winners. *Blue Jay* 23:102

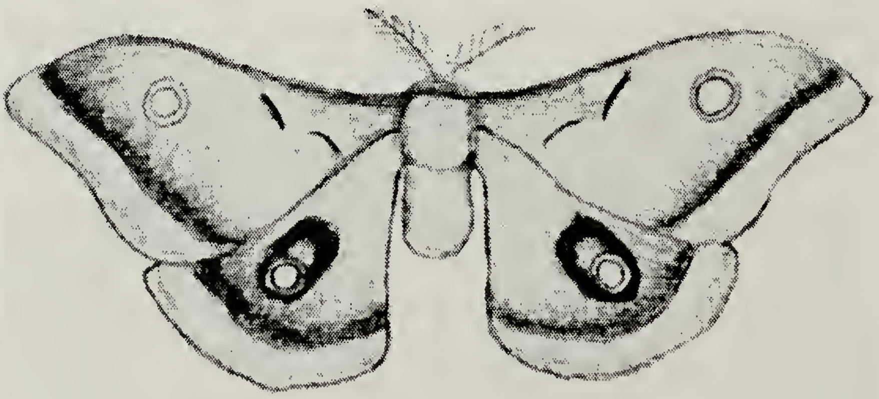
3. GOLLOP, M. 1962. Surprise. *Blue Jay* 20:46.

4. JMAEFF, J. H. 1958. Peaceful neighbors. *Blue Jay* 16:128.

5. JMAEFF, J. H. 1959. A gyrfalcon observation. *Blue Jay* 17:77.

6. MALUTA, B. 1966. Whip-poor-will at Hudson Bay. *Blue Jay* 24:94.

A second article in preparation will tell about earlier and concurrent articles by Saskatchewan juniors, outside of the Junior Naturalists section. It will assess participation by juniors in other activities such as Christmas Bird Counts, Co-operative Spring Migration Surveys, the Prairie Nest Records Scheme, bluebird house trails, and the American Ornithologists' Union meeting in Regina in 1959.



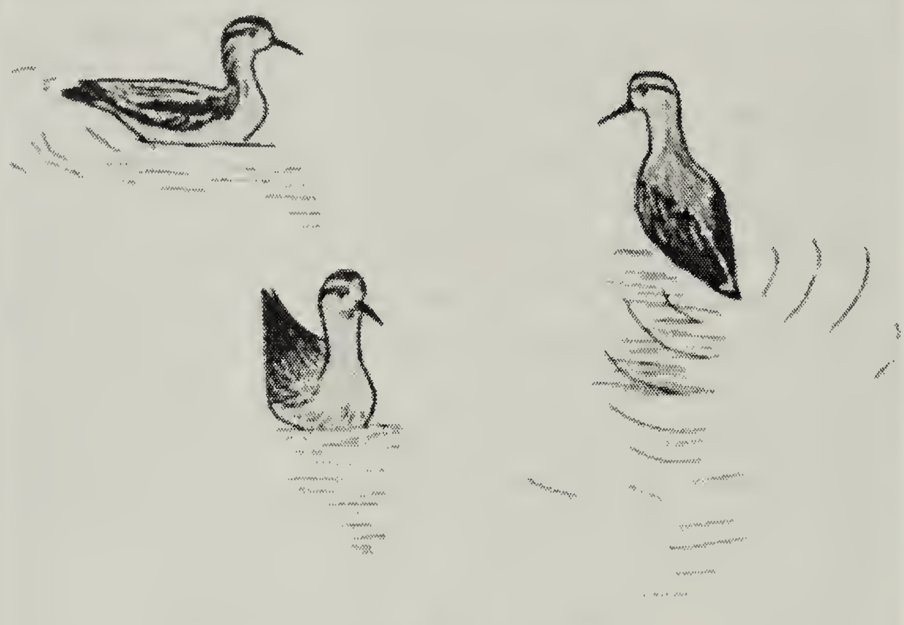
POLYPHEMUS OBSERVATIONS

by **Ralph Underwood**, age 16, Strasbourg

APPENDIX

SASKATCHEWAN (325)

Abernethy: Bryan Lyster; **Adams**: Kenneth Howland; **South Allan School, Allan**: Alan Boon; **Anglia:** Alice Bawron; **Everton School**, **Archerwill**: Fay Johnsen; **Armley:** Jim Breadner; **Arran**: Doreen Maksymchuk, Harry Wolf; **Barthel**: Herbert Mimrichter; **Beechy**: Alfred Jones; **Bladworth**: Sam Beckie*, Linda Edwards; **Blaine Lake**: Jean Kulick, Lyn Lamers, June Lamers; **Bredenbury**: Wilma Aim, Kathleen Gunnarsson; **CutArm School, Bredenbury**: George Mess, Sheila Mess, Joyanne Polson, Audrey Roberts; **Broadview**: Audrey Carpenter, David Chaskavich*, Charles Feathers, Brian James, Cheryl Jensen, Alfred Lange, Don Weidl*, Doreen Wilson; **Buffalo Narrows:** Gerald Laliberte; **Calder**: Eunice Gawdun, Verna Horaska, Rachel Niniowski, Colleen Schab, Lawrence Scraba; **Carmichael:** Roberta Forsaith; **Carnduff**: Richard Hogg; **Carrot River**: Paul Fowler, Ronald Nickel; **Churchbridge:** Herbert Hlady; **Clouston**: Edwin Kuchn; **Cochin**: Betty Ternier; **Coderre**: Donna Anderson, Joan Anderson; **Dalmeny**: Richard Loewen; **Dollard**: Marvin Morvik; **Dore Lake**: Maxine Johnson; **Dubuc**: George Chopping*; **Dundurn**: Harry Harder*; **Elrose**: Garnet Ward; **Endeavour**: Gordon Sawchuk; **Englefeld**: Beverly Herriges; **Estevan**: Sheila Carlson, Ross Lein*; **Evesham:** Lynn Sumner; **Flaxcombe**: Marion Clark; **Fort-a-la-Corne**: Ernest Sauve; **Gerald**: George Hruska, Merle Remus; **Goodwater**: Edward Hennon; **Grand Coulee**: Murray Rowan; **Grenfell**: Jim Elliott, Elizabeth Hubbard, Linden Hubbard; **Hagen:** Lorne Graupe, Ernest Skaar; **Hanley:** Glen Hass; **Hearne**: Frederick Gase; **Holbein**: Susan Pegg; **Hudson Bay**: Pat Earnshaw, Brian Maluta; **Indian Head**: Denise Beaulieu*, Peter Carton, Janet Gray*, Sharon Hubbs, Tim Keslering, Heather McLaughlin, Margaret McLaughlin, David Mounteney, Brian Scott, Kathy Skinner, Jackie Willerth; **Marguerite School, Indian Head:** Annette Francaise, Claire Francaise, Marcel Francaise, Lynne Simpson; **Invermay**: Myles Ferrie, Ed Shepherd; **Kamsack**: Judy Dubasov, Jacob Jmaeff*, Debbie Niniowski, Philip Olshewski; **White Rose School, Kegworth**: Helen Furtan, Elenor Konechny; **Kelliher**: Wayne Bernakevitch; **Kelvington**: Brian Irving*, Jack Lowndes, William Saban, Dianne Sloan*; **Kendal**: Joe Michel; **Killaly:** Johnny Kerelchuk; **Kindersley**: Glen Fox*, Lane Harris*; **Omand School, Kinistino**: Beverly Beaulieu, Gary Beaulieu, Linda Beaulieu, Brenda Gudelot, Gail Gudelot, Gary Hills, Marlene Hills, Barry Warbis; **Hazel Valley School, Kipling**: Douglas Cross, Brad Lawrence, Lionel Meszaros; **Lac la Ronge:** Lynn Ernst; **Lady Lake**: Donald Buckle*; **Leross**: Sylvia Bordass, Dale Brennan;



PHALAROPE
by Agnes Dobryden

Lloydminster: Jean Gould; **Lorlie**: Margaret Schick; **Lucky Lake**: John Bayless, Nicky Boon; **MacNutt**: Laverne Wendell; **Madison**: Karen Knight, Vicki Knight, Elizabeth McManus; **Mankota**: Darlene Svinger; **Marieval**: Margaret Bawden; **Maryfield**: Eileen Adair, Mildred Boon, Morley Bullock, Dale Flynn, Brenda Matte, Murray Moore, Laurie Robinson; **Marysburg**: Gregory Schulte; **Melfort**: Ian Kinnan; **Mennon**: Bob Buhr*; **Montmartre**: Gerald Wilke; **Moose Jaw**: Carol Andrews, Douglas Ewart*, Mary Gilles, Moray Lewis*, John Rhodes, Michael Rhodes*, Jack Zess*; **Moosomin**: Roberta Smith; **Moreland**: James Liggett; **Muscow**: Maureen Cyr, Lawrence Herperger; **Naicam**: Ron Jensen*, Murray Thompson; **Nipawin**: Sharon Evans, Anne Matthews*, David Riome*; **Oakshela**: Lyndon Reeve; **Edgewood School, Oakshela**: Carolina Kotulski; **Ogema**: Bob Turner; **Okla**: Lawrence Lamber; **Oxbow**: Robert Galloway; **Parkman**: Carolyn Johnson, Patricia Johnson, Rita Mursell, Joyce Smith, Dorothy Taylor; **Peebles**: Douglas MacFarlane; **Pense**: Beverly Esplen, Bonnie Frew; **Star Butte School, Piapot**: Glenn Fairweather, Dixie Hobbs, Liane Nielsen; **Pleasantdale:** Keith Harper; **Porcupine Plain**: Gladys Beveridge; **Prelate**: Ronald Gizin, Nick. Stebanuk; **Prince Albert**: Bernice Capusten, Donald Karasiuk*, Jimmy Zulkoskey; **Radisson**: Bryan Rothenburger*; **Redvers**: Sheila Purvis; **Regina**: Richard Albright, Trevor Apperley, Ronald Austin*, Bob Clements, Debra Doering, Bill Fleming*, Jan de Groot, Ruth Faith Herman, Erica Hoffman, Doreen Jasper, Harriet Jowsey*, Bob Kerr, Elizabeth Lane, June Martinsen, Wayne Miller, Sally Moss*, Lorrel Nero, Tamara Nero, Joey Purdy, Rick Sanderson*, Daryl Schaffer, Alex Steele, Peter Tsakires, Alan Wade*, Elizabeth Wagner*, Sherry Wallace, Shawn Wallace, Peter Wayte, Jack Wessel; **Rhein**: Karon Brooks, Marvin Hrynowetsky, Marjorie Wardlaw; **Rocanville:** Shirley Anderson; **Rokeby**: Gerald Kreba, Garry Thompson; **Rosthern**: Edward Andres; **Saltcoats**: Janice Bradshaw, David Farrell, Bill

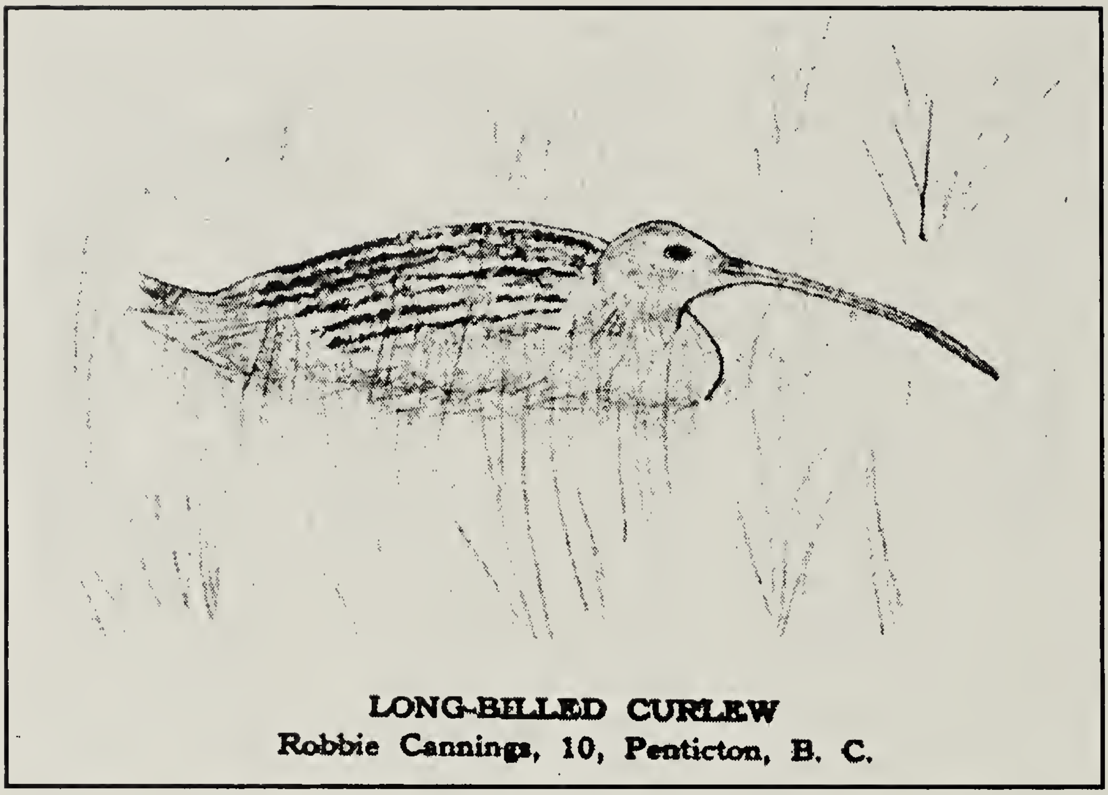
Sketch of Kangaroo Rat by Doreen Jasper, 13, Regina, Sask. The live Rat, taken near Sceptre, Sask. (see *Blue Jay*, Dec., 1956) is at present on display at the Museum.

Horseman*, Ronnie Kirkham; **Chatsworth School, Saltcoats**, Evelyn Mess, Lynne Maddaford; **Saskatoon**: Mark Abley*, Gary Adams, Mike Bantjes*, Joan Besant*, Barbara Binnie, Michael Gollop*, David Houston*, Ellen Nykyforuk, Tom Nykyforuk, Joanne Waite, Carol Van Dyck; **Semans**: Jane Richardson; **Shaunavon**: Douglas Young; **Shell Lake**: Joel Loseth; **Shellbrook**: Debra Hamilton; **Somme**: Don Hooper, Ron Hooper; **Springside**: Doreen Kovalyk, Stanley Pawliw, Dennis Simair; **Square Hill**: Dan Pawlivsky; **Stornoway**: Joyce Klingman, Grant Mehling; **Strasbourg**: Lois Everett, Kenneth Underwood, Ralph Underwood; **Sturgis**: Valerie Johnson; **Swift Current**: Mary Whyte; **Tarnopol**: Theodore Chytyk, Arlene Swicheniuk, Gerald Swicheniuk; **Tisdale**: Peter Skichan, Kenny Stirrest, Kenny Tompkins; **Tonkin**: Nelson Cherry, Colleen Farrell, Sharon Pearce; **Torch River**: Brian Evans, Dwight Hayes, Kathleen O'Drowski [a later submission came from Prince George, BC]; **Tregarva**: Kenneth Dickson; **Trossachs**:Gail Bernard, Corinne Goodwin; **Unity**: Mary Gillies; **Uranium City**: Pat Kerr; **Usherville**: Gordon Skuce; **Valley Centre**: Wayne Renaud*; **Waitville**: Lyall Hunter; **Whitewood**: Nicholas Shurvin; **Wilkie**: Phillip Keller; **Windthorst**: Gayle Dayman; **Yellow Creek**: Sherry Chubak, Delmer Dutka, Glen Flemming, Debby Gingara, Stella Holinaty, Colette Isinger, Robert Kotyk, Eugenia Koval, Josephine Kruppi, Donald Krytzak, Ellen Kuz, Byron Lane, Audrey Lebedowich, Evelyn Lypchuk, Dennis Matkowsky, Donna Matkowsky, Darwin Mazur, Derwent Mazur*, Gaylene Mazur*, Kenneth Mazur, John Mukli, Elsie Nemeth, Linda Nemeth, Rosemary Nemeth*, Bobby Oleksyn, Gary Oleksyn, Oli Oleksyn, Glen Orenchuk, Gordon Orenchuk, Kenneth Orenchuk, Rita Ozimirski, Joan Popiel, Irene Pylypec*, Bohdan Pylypec*, Iris Sheremata, Marie Sheremata, Colleen Shewchuk, Deborah Shewchuk, Allen Simon, Iris Simon, Linda Simon, Idelle Swickiniuk, Elizabeth Toth, Glen Wilchynski, Don Wojcichowsky, Audrey Zip; **Rhona Lake School, Yellow Creek**: Marion Kruppi; **Yorkton**: Margaret Houston*, Roxby Hughes*, Eugene Stauffer, Darcy Wershler*; **Young**: Marleen Christensen.

BULL SNAKE by Doreen Jasper, age 15 Regina, drawn from a captive snake at the Saskatchewan Museum of Natural History.

MANITOBA (26)

Benito: Lydia Koziol, Mary Koziol, John Rezansaff; **Brandon**: Randy Bauman, Vern Bauman, Brian Cutforth, Jack Endall, D. Knock, Wayne Miller, John Nicol, Richard Patterson, Bruce Peters, David Plews, Billie Pugh, David Randall, Dale Robinson, Gordon Rourke, Les Rourke, Doug Wong; **Cartwright:** Glen Watts; **Elma**: Gloria Tommila; **Russell:** Ron Klimack; **Sanford**: Agnes Dobryden; **Shoal Lake**: Derrick Edmundsen; **St. James**: Dawn Brodie; **Winnipeg**: Jonathan Davis.



LONG-BILLED CURLEW
Robbie Cannings, 10, Penticton, B. C.

BRITISH COLUMBIA (3)
Penticton: Bette Cannings, Robbie Cannings; **Vernon**: Robin Tamasi.

ONTARIO (3)
Camp Robinson: Nancy Reid; **Islington**: Len Nash; **Sudbury**: Pat Seifert.

ALBERTA (17)
Botha: Jack Dayman; **Brownfield**: Garry [no surname]; **Calgary**: Kevin van Tighem; **Carvel**: Henry Savard; **Chauvin**: Stella Ronaghan; **Codesa:** Duane Hillaby; **Edmonton**: David Hobson; **Erskine**: Evelyn Lohr; **Fleet**: Stanley Checkel; **Fort Vermilion**: Dan Ferguson; **High River:** Larry Rasmussen; **Irma**: May Ronaghan; **Neutral Hills**: Wanda Tennant; **Onoway**: Keith Turnbull; **Thorsby**: Bill Grasnick; **Two Hills**: Bill Greschuk; **Vermilion**: John Evans.

NORTH WEST TERRITORIES (2)
Fort Smith: Tom Bryant; Nahanni Butte: Mickey Kraus;

MISSOURI (1)
Columbia: Daniel Greenlaw.

MONTANA (1)
Glasgow: Diana Hartley.

WISCONSIN (1)
Laurie Thompson.

ENGLAND (1)
London: Keith Winstone

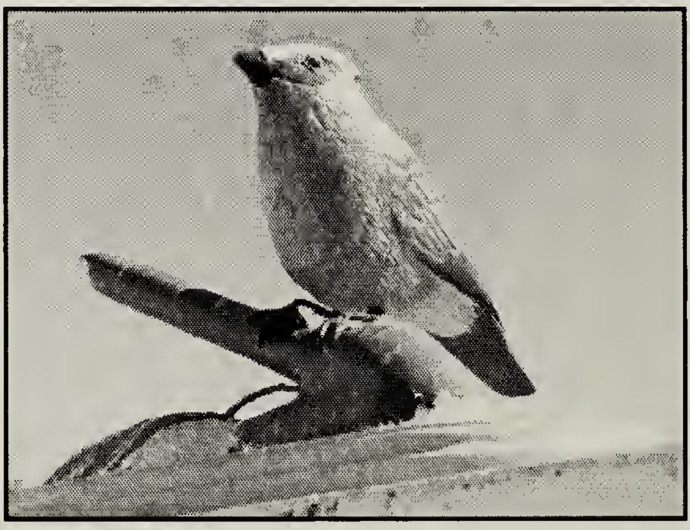
Cover photo story:

YOUNG CEDAR WAXWINGS

by **William P. Saban**, age 14, Kelvington

Last summer a pair of Cedar Waxwings made a nest in our caraganas near the house and another some distance away. Again this summer I found a waxwing nest containing four young ones. Three of the four seemed in good condition except the one which hatched later and appeared to be sleeping most of the time. In a few days the youngest one had grown as big as the other three.

I came upon this nest August the ninth and I guessed the young were two weeks old. On August twelfth all four had taken flight.



A recent waxwing carving by William P. Saban.

BALD EAGLE NEST WITH YOUNG IN SOUTHERN SASKATCHEWAN

DAN ZAZELENCHUK, Box 39, Kyle, SK S0L 1T0. E-mail:<danzaz@sasktel.net>

On June 11, 2005, the first Bald Eagle nest with young, in at least 100 years, was confirmed for southern Saskatchewan. Golden Eagles have been banded along the South Saskatchewan River since 1960 but there have been no reports of Bald Eagle nests with young anywhere in Saskatchewan south of the Aspen Parkland.[3]

Two previous nesting attempts have been reported. In 1987, there was an unsuccessful nesting attempt by Bald Eagles on Lake Diefenbaker near Coldwell Park.[2] In 2004, a pair of Bald Eagles, perhaps the same pair as seen this year, built a nest in a Cottonwood (*Populus deltiodes*) on an island where the Red Deer River flows into the South Saskatchewan. The confluence is approximately 6.4 km east of the Alberta-Saskatchewan border near the Estuary ferry crossing. In 2004, a Bald Eagle sat on that nest through May, but the nest had been abandoned by June 1.

On April 8, 2005, a Bald Eagle was observed on the same nest used in 2004. It was low in the nest, as if incubating eggs. Young eaglets were first observed on June 3, 2005 when Dave Sorenson and I were flying over the area to confirm Golden Eagle nests. On June 11, Dick, Jack, Steve and Carson Clegg and I visited the nest to band the chicks.

The nest was difficult to reach. It is on an island and the peak of the largest flood water from Alberta in ten years was set to hit Estuary on the day we visited the nest. Kerry Wrishko took us to our launch point on the south side of the river where the railroad used to cross. Where we launched, the pillars (all that is left of the

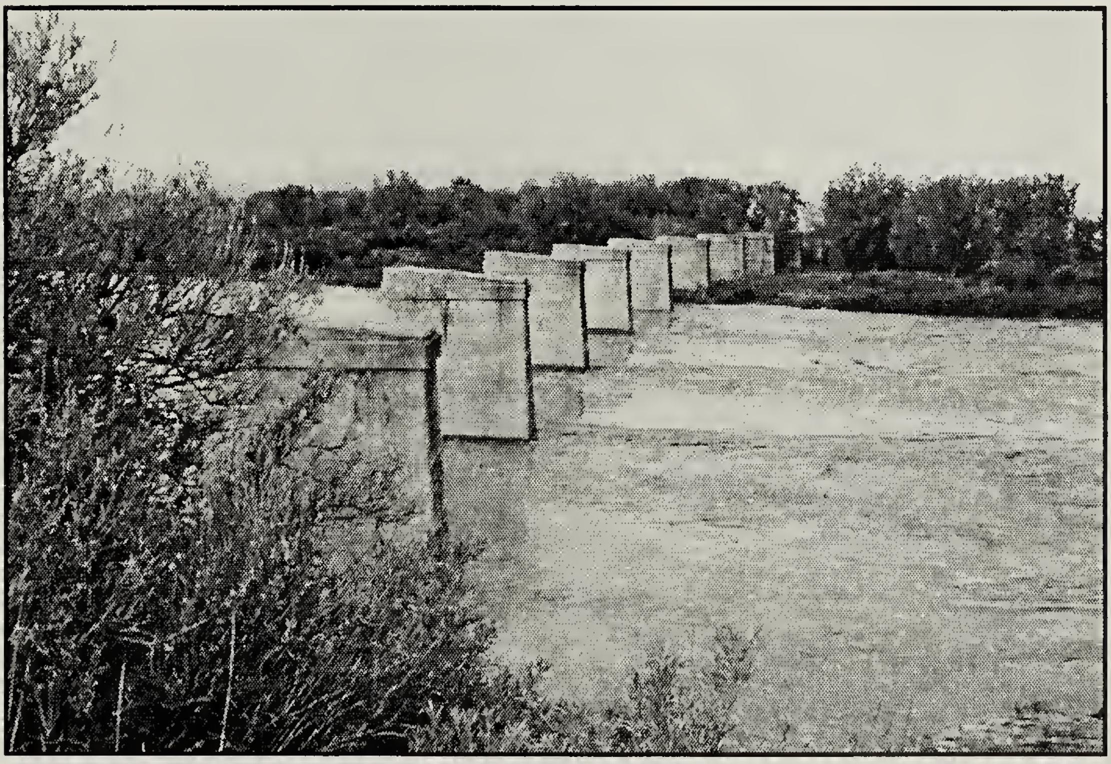


Figure 1. Pillars of the railroad bridge, June 11, 2005

Dick Clegg

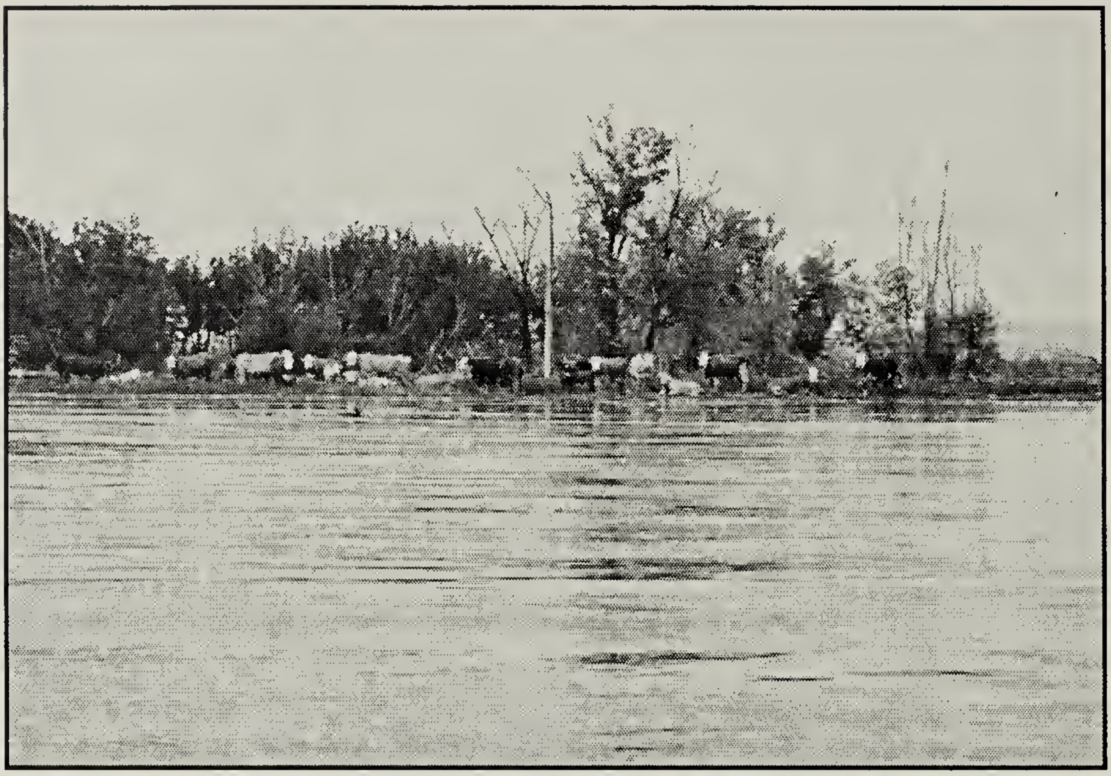


Figure 2. Cattle on nest island, June 11, 2005 *Dick Clegg*

railway bridge) crossed what was usually a small side channel that sometimes dries up during the summer. At peak flood, however, the channel alone was wider than the river is usually, and the water swirling and whirlpooling around the pillars was just a little unnerving to a flatlander like me (Figure 1). We pulled and pushed our way through the branches and went out into a side channel with all sorts of debris and even whole trees as company. The current wasn't too fast, so, with four of us paddling, we were able to stay ahead of the junk in the water. The main channel of the South Saskatchewan River was more of the same, just much wider. By aiming for the middle of the island to allow for the current, we were able to hit land a bit upstream from the nest tree which is near the downstream end of the island. Or rather, we arrived where the island used to be. Two days before, I had seen approximately thirty head of range cows and calves on the island. They appeared content, some of them grazing and lying right underneath the nest tree. Now most of the island was under water. The cattle that we saw as we paddled and poled our way through snowberry bushes were definitely unhappy as they stood in water that was still rising. (Figure 2) Cattle are good swimmers, but not by choice. (Later, I learned from the owner that all the cattle on the island survived the flooding, but that some of them were still stranded there a month later.)

The nest is in a live Cottonwood with several large trunks. The trunk with the nest is 2 m in diameter at the base (Figure 3). The nest is approximately 15 m above ground, near the top of the canopy, and exposed, since the part of branch above the nest is dead.

Figure 3. The eagle nest is in the cottonwood trunk on the left

Dick Clegg

There were three nestlings. Comparing them to the photos in an age development chart developed by Gary Bortolotti, he and I estimated that the eaglets were seven to eight weeks old on June 11 (Figure 4). Assuming an average incubation period of 35 days, brooding started in the middle of March, about a month earlier than Bald Eagles in the Loon Lake area, 200 km to the north, but similar to the start of incubation by Golden Eagles along the South Saskatchewan River.

The larger two eaglets were judged to be female, while the smallest and least developed one was judged to be a male. Determination of sex was based on the size of the tarses, noted while attaching the bands, and by the fact that females have stouter legs than males.

The young eaglets appeared well fed. There was no food in the nest, but while we watched, one of the adult eagles attempted to land in the nest with prey, a large downy bird with long legs and neck. With an active Great Blue Heron rookery less than a kilometre away to the west, the prey was most likely a heron chick.

Three is a large number of young for this species; just four percent or one out of twenty-five Bald Eagle nests have three eggs, and often one or more of those eggs fail to hatch.[1] Unfortunately, we were unable to revisit the nest to determine fledging success.

Acknowledgements

Kerry Wrishko, conservation officer from Leader, was invaluable in securing a canoe for us from the Leader scout troop, in guiding us to a suitable launching spot, and then picking us up from our downstream landing (he wasn't crazy enough to want to come with us!). Martin Gerard of Saskatoon provided us with five life jackets. The Cleggs of Chilliwack. B.C., were willing to risk a dunking in the semi-arid prairies, and provided the watercraft experience that made the crossing relatively easy.

1. BUEHLER, D. A. 2000. Bald Eagle (*Haliaeetus leucocephalus*). In: The Birds of North America, No. 506 (A.Poole and F. Gill,eds.). The Birds of North America, Inc., Philadelphia, P.A.

2. ROY, J. F. 1966. Birds of the Elbow. Nature Saskatchewan, Regina.

3. SMITH, A. R. 1996. Atlas of Saskatchewan Birds, Nature Saskatchewan, Regina.

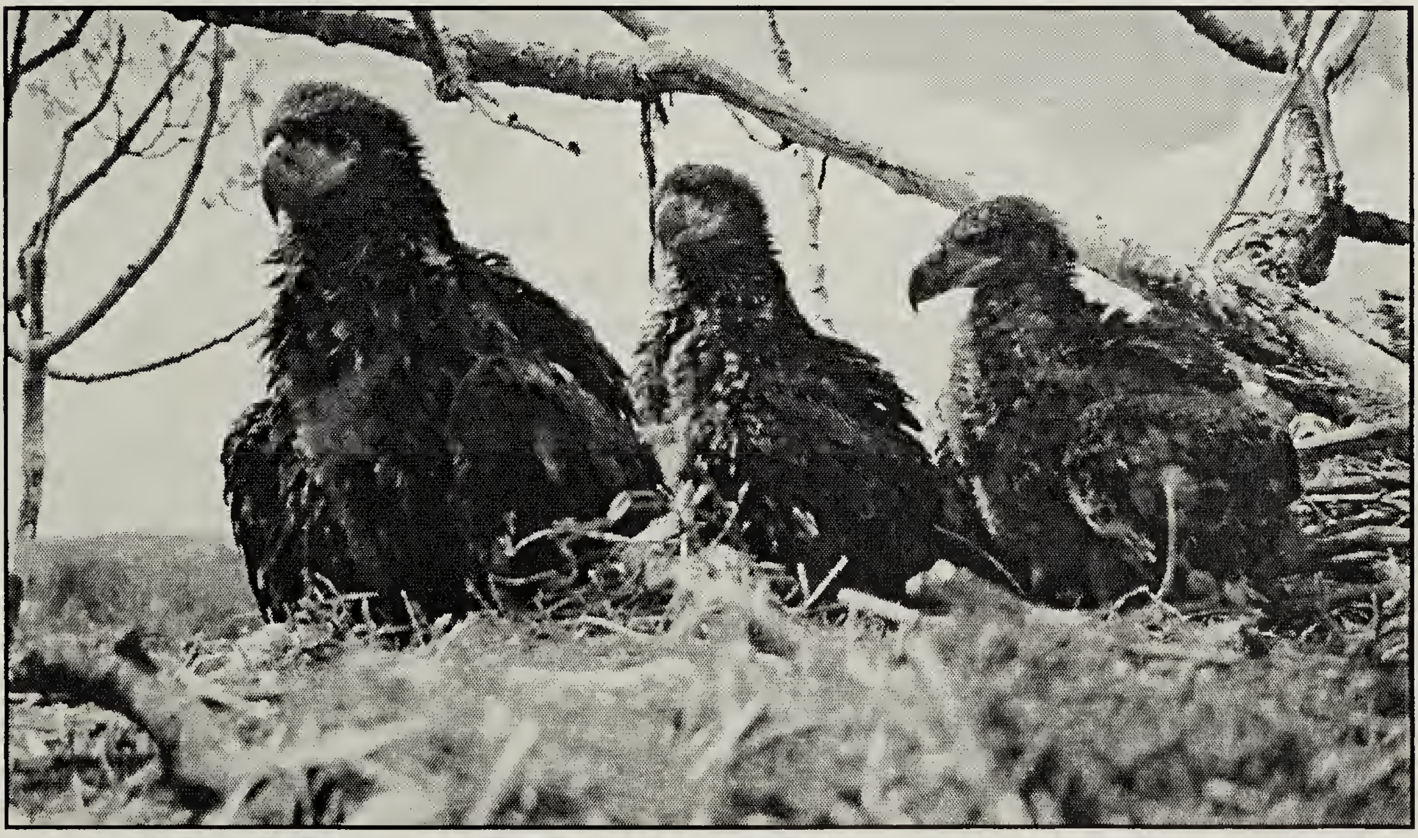


Figure 4. Eaglets in the nest, June 11, 2005 *Dick Clegg*

EARLY SASKATCHEWAN BIRD BANDERS*

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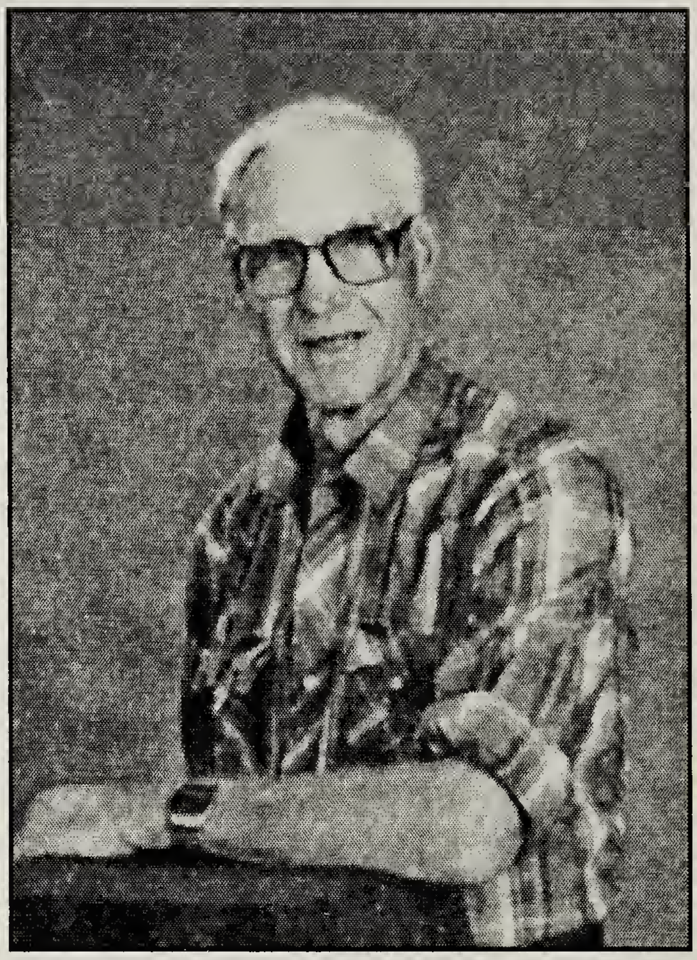
This article completes the series on Saskatchewan residents who began banding prior to 1955. Banders are presented in a roughly chronologic order of their active years of banding as shown by the dates after their name. Localities are within Saskatchewan unless stated otherwise.

Edmund LaVallee, 1932

LaVallee, when living at Cupar, obtained banding permit #00245 on May 18, 1932. Schedules show that he banded only three birds that year, two House Wrens and a Black-capped Chickadee, yet he did not give up his permit until he moved to Strasbourg on July 17, 1939. The sole chickadee he banded spent two winters at the farm home of Henry Anderson, near Product post office south of Kandahar, before Anderson was able to capture it by hand and read its band number. It had traveled 80 km NNE, the greatest distance known to have been traveled by a Saskatchewan-banded chickadee.

Thomas Harper, 1933-1940

Tom Harper, permit #00238, began banding west of Simpson in 1933. By 1940 he had banded 418 birds of 29 species. From these he had 12 recoveries, including a Downy Woodpecker found at a nest hole at Young, about 32 km NNW, the following March. Four Yellow-shafted Flickers were recovered: one found dead locally, one caught by a cat the same fall in Minnesota, one recovered in Louisiana, and another found dead in Texas over a year after it was banded. An American Robin drowned nearby. Mallards were shot in Minnesota, Wisconsin, Illinois, Oklahoma and two in Texas.



Tom Harper

Tom's father, Chris Harper, had come from Kendal, Westmoreland, England. Chris arrived in Davidson in April 1906; early in 1914 he and Mary Findlay, a Scots lass, were the first couple to be married in the Anglican Church in Simpson. Tom, their first child, was born on December 17 that year. The Harper farm home was 10 km south and 5 km east of the Hedlin homestead (see below).

R.C. Willett, 1937-1939

Bob Willett, permit #00318, banded 186 birds of 17 species when he lived at Cochin, beside Jackfish Lake.

Bob Willett

and Slate-colored Juncos. It was operated by pulling a string that dropped an inverted screen box over birds on the ground.

Willett banded 1,286 birds of 17 species. From these, he had four recoveries or encounters. (An 'encounter' is the all-inclusive term that includes birds found dead or alive, whereas 'recovery' should be restricted to birds found dead). An adult House Wren returned to nest again in a nest box the following year. An Eastern Kingbird was killed three days after banding by a larger bird, perhaps a crow, and a Western Meadowlark was found dead two days after banding. His *tour de force* was to band a single Bobolink and have this "rice bird" caught on its winter territory in Louisiana.

Nearly 60 years later, in 1995, he published a one-page vignette, "I was a teenage birdbander" in the Western People section of the *Western Producer*.

Bob Willett was 15 when he and Robert D. Symons spotted an albino American Robin. It was among a flock that stayed later than usual to benefit from thousands of freeze-dried berries left by a late-September frost around the cottage area at Jackfish Lake. With the help of Symons, local game warden, naturalist, and friend, Willett was able to obtain a bird banding permit as soon as he turned 16 in May 1937. Also under Symons' tutelage, Willett built houses and ledges for swallows, bluebirds, wrens, phoebes, and robins, so that he could band the nestlings. He built a drop trap to band migrating American Tree Sparrows

Homer Myers, 1937-1939

Homer Myers, permit #00344, banded 245 birds of 22 species at Rabbit Lake. He had three recoveries. A Barn Swallow was tangled in a net two weeks after banding and an Eastern Kingbird was caught in a fish net locally. A Western Meadowlark (then common, but by the 1990s no longer breeding in the area) was shot in Oklahoma.

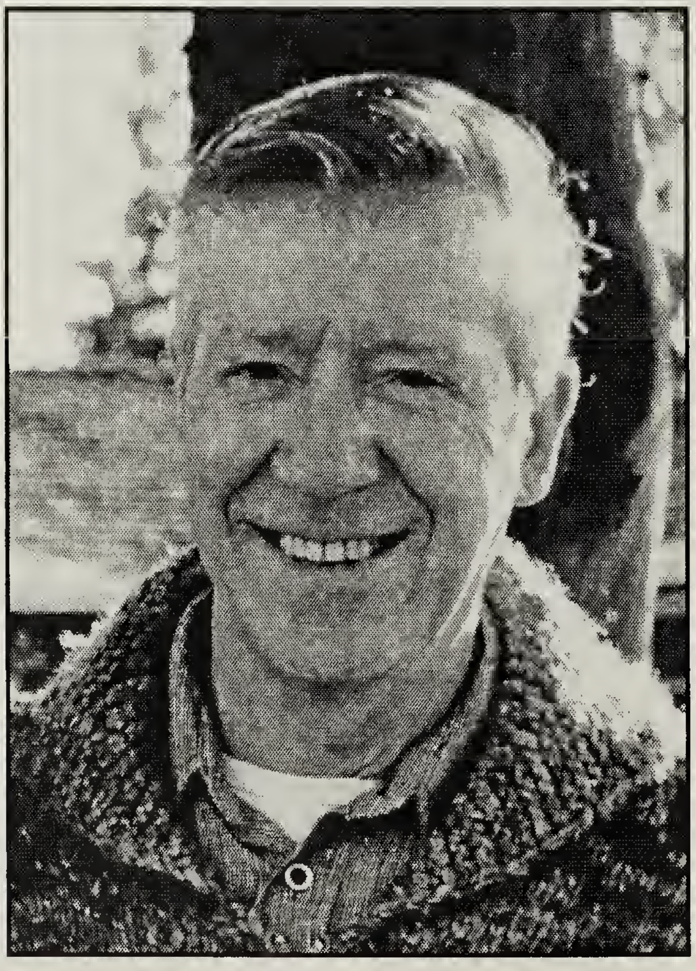
When Myers' pre-1955 recoveries were retroactively entered into the computer, a clerk in the banding office ascribed to them the latitude and longitude of a small lake, Rabbit Lake, southeast of Redberry Lake, rather than the true banding site, the village of Rabbit Lake where Homer Myers lived, 75 km to the northwest.

Arthel Simard of Cabri, 1938-1939

In 1938 and 1939, Arthel Simard, a storekeeper at Cabri, banded 70 birds of 16 species (under permit #00467), including the first Prairie Falcon and the first adult male Cinnamon Teal banded in Saskatchewan. He had six recoveries. Both of his banded Black-billed Magpies were shot locally. The only Prairie Falcon he ever banded was found injured 16 days after banding. From 52 waterfowl banded, he had a Mallard and a Gadwall shot locally, and a Blue-winged Teal shot in Montana.

Ralph and Alan Hedlin, 1938-1939

Ralph and Alan Hedlin took up bird banding in 1938, encouraged by Hartley Fredeen, with whom they corresponded through the Young Cooperator's section in the weekly farm newspaper, the *Western Producer*. Ralph and Alan, cousins, lived 4 km apart in the Hawkshaw School district near Renown, and shared permit #00362. Ralph and Alan were, in fact, double first cousins; their fathers, Oscar and Frans, had married two Neatby sisters, Edith and Margery.



Alan Hedlin

Ralph and Alan banded 430 individuals of 24 species, 104 of which were banded by Alan in 1938; Ralph carried on alone in 1939. Together, the two lads had seven recoveries: a Swainson's Hawk killed locally, a Loggerhead Shrike recovered at Gainsborough (395 km to the southeast), and American Crows at Tichfield and Lanigan, Saskatchewan, and in Nebraska, Oklahoma and Texas.

Ralph Hedlin later became associate editor of the *Country Guide*. In 1951, he wrote a glowing article that brought in 102 new memberships to the *Blue Jay* in its first year of printed format, a big membership boost. His sideline writing included a fine reminiscence of his boyhood adventures with a coyote named Aya-oo, published in *Field and Stream* in 1956. When Ralph left the farm magazine, he founded Ralph Hedlin Associates, a sophisticated economic and policy consulting firm.

Alan Hedlin was a radar mechanic attached to the RAF in the Second World War, then specialized in forest entomology and worked for eight years at the Forest Nursery Station at Indian Head. After 1955, he pursued his career in British Columbia, where he retired in 1979.

Arthur Ward, 1939-1957

In 1926, Fred Bradshaw sent Ward two bands from Regina, to place on two young Black-billed Cuckoos. This roused Ward's interest, but it was not until 1939, when he was 64, that Ward obtained banding permit #00426 and set up a banding station on his farm near the hamlet of Burnham east of Swift Current. During the 19 years from 1939 to 1957, he banded 2,820 individuals of 87 species and four additional subspecies. After he moved into Swift Current in 1948, he continued to band birds during visits to the farm. The species with the most individuals banded were Clay-colored Sparrow (328), Slate-colored Junco (305), White-crowned Sparrow (300), and American Robin (246). He also banded Say's Phoebes that built nests on his farm buildings each year, and Western Kingbirds which were initially rare, but increased as the trees grew in what was once treeless prairie habitat. By use of a water-drip trap, he banded 17 species of warbler, mainly in migration, an exceptional achievement on the open prairie at that time.

Arthur Ward holding a young Black-crowned Night-Heron, 1937

In 1915, Ward obtained 2,000 trees from the Indian Head Forest Nursery Station to plant as a shelterbelt. To water them, he hauled many barrels of water by stoneboat from Rush Lake Creek, (locally called Cutbank Creek), 4 km to the south. Twenty years later his farm grove formed a small oasis on the open prairie.

Examples of banding events that provided dates for birds rarely seen on a farm shelterbelt on open prairie are Golden-crowned Kinglet, October 7, 1946; Townsend's Solitaire, August 8, 1949; Varied Thrush, September 7, 1949; Yellow-breasted Chat, May 27, 1949; Dickcissel, June 22, 1953; Bullock's Oriole, one each on August 7 and 8, 1943; Red Crossbill, July 18, 1950; White-winged Crossbill, October 13, 1946 and again on June 20 1947. On January 18, 1954, he caught a European Starling, one of a very few wintering individuals.

Ward had several "returns," i.e. birds that came back to the banding location in subsequent years, including a Barn Swallow that returned after four years and an American Robin after three. His six recoveries included a Mallard that was shot at Mecca, California and a Mallard and two robins that died locally. A Brown Thrasher was killed in a storm near Lucky Lake on June 23 of the year after banding, and an American Robin was killed by a cat at Kerrobert on July 24, two years after banding. These two offer possible evidence of northward natal dispersal from Burnham of 80 km for the thrasher and 220 km for the robin.

Arthur Ward was born near Wombwell, north of Sheffield, England, on September 12, 1875. He came to Canada at age 27 and filed for a homestead, SE 30-15-11w3, 19 km east of Swift Current, on May 31, 1903. After working during the fall and winter in Manitoba, he returned to build a shanty and a stable on the homestead in April. A branch line railroad did not reach Burnham, the end of the steel, until 1931; the post office opened in the hamlet in 1933.

He was the first councillor for Division 5 of the Rural Municipality of Coulee, and later served as its reeve. In 1907 he obtained a license to mine lignite coal in the coulee south of his farm, but after supplying coal for the Swift Current hospital for a few years, the coal was soon mined out. After a courtship by correspondence, Emily Hinchcliffe arrived from Wombwell on February 7, 1913; they were married on March 13.[4]

Ward subscribed to the *Blue Jay* from its beginning late in 1942. An account of the first 198 birds he banded appeared in the second issue of volume 3.[3] When the first annual meeting of the new Saskatchewan Natural History Society was held in October 1949 to continue publication of the *Blue Jay*, Ward was one of five elected to the executive. He gave at least one talk at an annual meeting and contributed 35 notes to the first 13 volumes of *Blue Jay*. One article dealt with bird banding and another recounted the delightful happenings at a Yellow Warbler nest in a “creeper” 15 cm from the glass wall of the arbour in his garden. He died in Swift Current on January 5, 1958, at age 82. His wife, Emily, died in 1979, nine months after her 100th birthday.

Ronald and Donald Hooper, 1954-1956

Between 1954 and 1956, the twin Hooper brothers, Ronald and Donald, permit #00723, banded 177 birds of 26 species, including 63 Slate-colored Juncos and 22 Harris’s Sparrows, on the family farm north of Somme. No recoveries resulted. Dedicated naturalists, they compiled a preliminary list of the birds of the Somme area in 1954 and in 1992, Don published *Birds of East-Central Saskatchewan, Kelvington to Kelsey Trail*, as the first in the Manley Callin series.[1] In 1973 Ron published *Butterflies of Saskatchewan*.[2]

Bryan J. Isinger, 1954-1956

Bryan J. Isinger, permit #00807, banded five nestling Purple Martins at Big River in 1954 and four at Yellow Creek in 1956. No recoveries resulted.

Early banders not assigned a permit number

No band permit numbers were assigned retrospectively to four banders, whose banding schedules were unexpectedly discovered by myself and Mary during research at the Bird Banding Laboratory at the Patuxent Wildlife Research Center at Laurel, Maryland, in 1990. Lawrence B. Potter of Eastend banded 3 Mountain Bluebirds in 1929. Mrs. T. Willers of Viceroy and Ellisboro banded 188 birds of 30 species, chiefly robins, wrens and Barn Swallows between 1927 and 1931. O.C. Furniss of Prince Albert banded 39 individuals of 5 species in 1932 and 1933. E.H.M. Knowles of Regina banded 15 birds of 6 species in 1934.

1. HOOPER, D. 1992. *Birds of East-Central Saskatchewan, Kelvington to Kelsey Trail.* Special Publication #18, Saskatchewan Natural History Society, Regina.

2. HOOPER, R. 1973. *Butterflies of Saskatchewan.* Saskatchewan Department of Natural Resources, Regina.

3. HOUSTON, C.S. 1945. Saskatchewan Bird Banders. *Blue Jay* 3:16.

4. WARD, C.. 1986. *Ward Family History, 1770-1985.* 99 pp. Published privately. A copy is housed in the Saskatchewan Archives.

*Number 23 in a series of articles on Saskatchewan bird banders

MAMMALS

THE FOX THAT STOLE THE APEX OF PALLISER'S TRIANGLE: A CORRECTION

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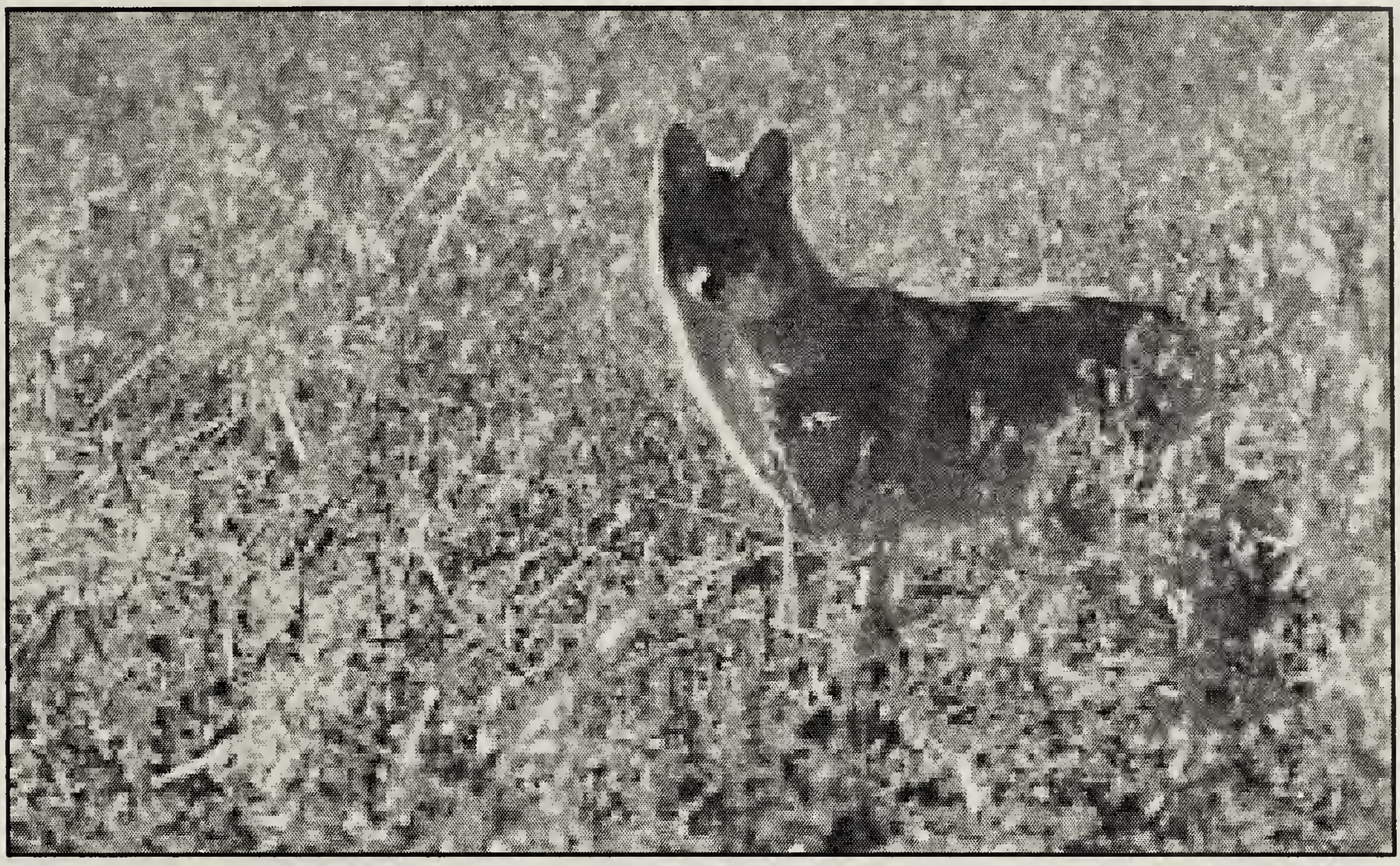

Satiated coyote near the Luseland sewage lagoons in late October 2002. Coyotes have regained control of much their former domain, and they may retain it, depending on our changing attitudes and policies. *J. K. Finley*

My father, Bob Finley, and Sig Jordheim were both born in 1921 on their father's homesteads, just 45 miles apart, between the North and South Saskatchewan rivers ... that is, at the heart of Palliser's Triangle. As the first generation of sod-busting pioneers, they experienced much in common through the first century, raising their families on grain farms, both attuned to the land, sharing a keen interest in wildlife. This common heritage set the stage for a remarkable coincidence: they both killed the first Red Fox they ever laid eyes on. In doing so they established two significant milestones in the annals of prairie natural history. Both events were recorded in *Blue Jay*, the first as a note by Mr. Jordheim, in 1995, the second as my response to that note.[1, 2]

That first fox made a big impression on Mr. Jordheim, and three decades later he recalled the event as if it was only yesterday. "My first contact with a wild Red Fox came on 17th November 1966 when it ran onto the road in front of my truck, two miles north of my present farm [near Kyle on the north side of the South Saskatchewan River]. The snow was perhaps 10" deep and the fox chose to stay on the hard track. I slowed down to give it a chance to get off, but it would not, so deciding this was a good chance to destroy it, as I raised poultry, I stepped on the gas and drove over it, stopping immediately and picking it up. It was killed instantly and I found it was a female, weighing 10 pounds and measuring 44" in length." He wondered whether the fox had escaped from a fur farm, and noted that they became plentiful in the 1970s and 1980s, following a great decline in jackrabbit populations.

His recollection prompted my own of the first fox that my father or I had ever seen near Luseland, about 110 miles NW of Kyle (i.e. beneath the apex of the Triangle). I recalled that it happened in early winter a year or two earlier than Jordheim's record (i.e. 1964 or 1965), and suggested that the subsequent invasion was due, indirectly, to the snowmobile revolution and removal of the apex predator, the Great Plains Coyote (*Canis latrans latrans*), from the prairie ecosystem.[2] As it turns out, my memory of the date was faulty, throwing a wrench into my thesis, which I'm obliged to fix.

The truth was handed to me by my mother, in a bulging manila envelope, not long after my son's graduation from Grade 4. It remained sealed until one autumn afternoon when the time seemed ripe for its revealing. Therein, amongst documents from my early education, I found a scribbler, not much larger than the *Blue Jay*. It had a tactile, electric-blue cover that elicited vaguely unpleasant sensations. Skimming the first few pages of grammatical exercises, pencilled in long-hand, I encountered my first lesson in correspondence, dated November 23rd, 1960. It was an invitation to a friend to come to my place for a party. With a jolt, I found myself transported back to a living nightmare–the dungeon of Grade 4 and the dragon of Mrs. Klass. It was the grim year of the 'Uncle Funny Bunny' reader, interminable times tables, and staying after school to write lines.

Turning a few more pages, I came across my next correspondence lesson, the subject of which caused my jaw to drop: "Will you come to my place. We have a red fox." The ghost of my past practically leapt off the page and handed me the answer to an outstanding question that I thought would never be asked, let alone answered: When, exactly, did that first Red Fox trespass beneath the apex of Palliser's Triangle ? The correspondence was dated December 5, 1960.

My exercise received three X's for punctuation and content, so, on the following page, I'd re-written it, clarifying that "We shot a red fox." and that, "We went after the fox. We raced through trees and bob [sic] wire." For that exciting news, I received a curt red check mark. Maybe she thought I was a liar since nobody had ever seen a fox on the prairies, let alone killed one. But I was a liar anyway, I recalled, for that fox was in the middle of a snow-covered stubble field, with not a tree or 'bob wire' fence in sight. Like a bad case of deja vu, I found myself back in that grim class room, helplessly struggling with words to describe the most exciting moment of my life. Undoubtedly, my mind was still on fire from the excitement of the chase, and I could barely contain myself until the bell rang, and I'd show my friends the prize.

I was still smiling at my good fortune when my son arrived home from school (by which time he was in Grade 5). Triumphantly, I showed him the blue scribbler and attempted quickly to encapsulate all that it meant, employing a bit of hyperbole: It's proof of the first fox to have trespassed into the coyote's kingdom. It's not like it used to be, I opined, as fathers are wont to do. But his attention was drawn to the bold X's. Oh those, the teachers were much stricter in the old days, and Mrs. Klass was the strictest teacher in the school, if not the whole province. Anyway, I said, pointing to the embellished version, I got it right the second time.

To be more precise, that fox was likely killed on the morning of Sunday, December 4th, because that's when my father would have been evading church, cruising the country-side, hunting jackrabbits and coyotes with his boys. It was six miles due north of town at 52° 11' N, 109° 22' 30" W. Like a misplaced specimen tag, the entry in my blue scribbler gives authenticity and context to the record. First, it represents the earliest record of the invasion in the region immediately beneath the apex of the Triangle. Second, it occurred six years earlier than Sig Jordheim's record, further south.

As soon as I was able to reconcile my memory (this was Before Beatles!), I attempted to recall when I saw the next fox. I remembered the occasion well, partly because of a guilty conscience: I'd taken my father's rifle–the one he'd used to slay the first fox–without permission. Spare the details, but in confessing my misdeed, we deduced that it happened in the late winter of 1963. Had they been present before then, I'm certain that I or a member of my hunter-naturalist family would have known.

They became established within a couple years. I recall finding the first den with kits in a small pasture, a mile southwest of town, on the same knoll–if not actually in the same burrow–that had once been occupied by Burrowing Owls. In about 1966, I showed Stuart Houston a Great Horned Owl nest in an aspen grove in this same pasture, by which time the Burrowing Owl nest site had been taken over by foxes. Thus, foxes were already established near the apex, before Mr. Jordheim saw his first one, over a hundred miles further southeast. By the late 1960s, they were common, and by the early 1970s, they had become abundant, causing ecological havoc.[2]

Contrary to my earlier thesis, the 'first' fox appeared before the snowmobile revolution began in earnest. In fact, it appeared only a year after the 'Father of the Snowmobile', Monsieur Bombardier, began mass production of the Ski-Doo, a machine that was to revolutionize winter life and bring about a drastic decline of the coyote.

In an earlier paper in *Blue Jay*, Nora Stewart of Craven (just north of Regina) noted that there had been a "tremendous increase in foxes along with the decrease in coyotes in Saskatchewan since the late 1950s."[3] She suggested that the rapid decline of the coyote was due to public poisoning programs, and wondered what the 'balancing effect' of the coyote was on the fox population. It was a prescient question that, remarkably, has been ignored until only recently.

For an earlier local perspective than my own, I contacted my father's cousin, Bennett Finley. He replied: "Certainly your recollections re: red foxes agree with mine. There were NONE when I was growing up and I used to hunt coyotes with your Dad at that time. Nor were there any deer, antelope or moose in the greater Luseland area. (40s and 50s) I think that the great decline in coyotes over the larger area was due to poisoning which was very widespread and often talked about by farmers and ranchers. Not so prevalent around Luseland as in other areas.... None of us liked this poisoning--not from any great ethical reasoning but because we wanted coyotes to hunt."

Thus, by 1960, before snowmobiles came into widespread use, coyotes had already been reduced in number, but the main invasion of foxes occurred in the last part of the 1960s, after the slaughter of coyotes by snowmobilers had occurred. (The slaughter was exacerbated by the heavier-than-normal snowfall during this period, along with a buoyant economy that encouraged winter 'sports,' before ethical considerations arose and laws became entrenched.) In this respect, Sig Jordheim's record of November 17th, 1966 marks a significant milepost in the progress of the invasion at the heart of the Triangle.

Post Script

On February 28th, 2005, while driving east along a grid road, only 3 miles from where the first fox was killed, my brother and I encountered a Red Fox (at 52° 10' 40" N, 109° 26' 40" W). It was a balmy sunny day and the fox was sleeping in a snow-covered stubble field, near the road. As in the case of the first fox, there wasn't a tree or 'bob wire' fence in sight. From a biogeographic perspective, 45 years apart, they had been caught in the open on the south bank of a broad glacial valley (Grassy Lake), once renowned for its rich dark soils and lush growth of 'prairie wool' or fescue grassland. It struck me then that their close proximity was not entirely coincidental–they were situated in a sort of no-man's land, where virtually all native prairie had been plowed under, and where there were no 'prairie wolves' to keep them out. Nature abhors even the smallest vacuum; foxes will continue to hang on where they can.

Acknowledgements

In memory of Alice Klass who, from 1949 to 1970, taught us 'Luseluddites' how to read, write, and do arithmetic. As ruthless as Mother Nature, her no-nonsense, even-handed, spare-the-praise approach to life better prepared us for the rigours of life beneath the apex. This essay is dedicated to my father, the nimrod who collected the first fox, and to my mother, the archivist who kept the evidence.

1. JORDHEIM, S. 1995. Foxes in south-central Saskatchewan. *Blue Jay* 53 : 232-233.

2. FINLEY, J.K. 1996. The red fox invasion and other changes in wildlife populations in west-central Saskatchewan since the 1960s. *Blue Jay* 54 : 206-210.

3. STEWART, N.M. 1969. Coyote management in Saskatchewan: is poison the answer ? *Blue Jay* 30: 138 - 145.

* * *

"The Double-crested Cormorant is a diver, using its webbed feed to propel it underwater on its hunt for fish. To help it sink, a cormorant's feather are not waterproof, so it must spread its wings to dry when it has finished fishing."

Scott Weidensaul, *The Birder's Miscellany*, p. 31.

AMPHIBIANS AND REPTILES

CRANIODICHOTOMY IN A *CROTALUS*: A TWO-HEADED PRAIRIE RATTLESNAKE NEAR LEADER, SK

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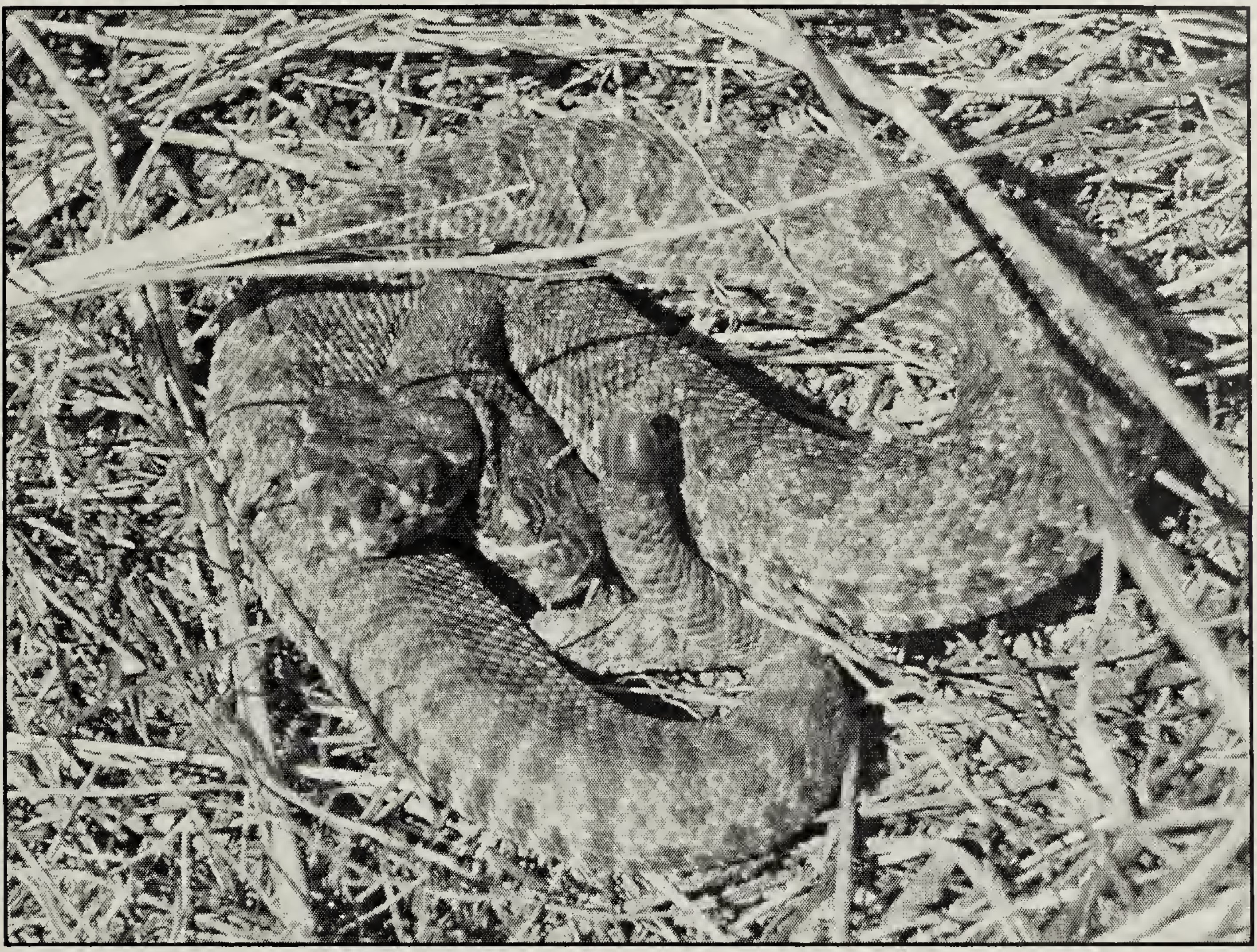

Figure 1. Two-headed Prairie Rattlesnake photographed on October 3, 2004 near Leader, SK. The "pre-button" rattle has only one segment, indicating that this individual is recently born as it has not had its first post-partum shed. *A. Reid*

Prairie Rattlesnakes, *Crotalus viridis*, are a rare sight on the Saskatchewan prairies. They occur only in the southwestern to south central portion of the province, and their range has been reduced by development of the prairies for agriculture. People's reactions to rattlesnakes vary from avoidance to killing snakes on sight to seeking out dens and destroying them, despite the rattlesnake's protection under the Saskatchewan Wildlife Act.[5] Thus, seeing Prairie Rattlesnakes in the wild is a priviledge not often granted.

My friends Kattia Carrasquilla, Vanan Kesavan and I have located several denning sites just outside of Leader, SK, generally all within a kilometre or two of the South Saskatchewan river. Dens are critical to rattlesnake survival as they provide protection from the harsh winter climate for these snakes, which brumate below the frost line.[5] (Brumation in reptiles is a state of reduced metabolism triggered independently of environmental temperature.) Shortly after emerging in late April or early May, the non-breeding females and males disperse several kilometres from the den, but gestating females stay close to the denning site until they give birth in early August[5]. Thus, on October 3rd, 2004 we were not particularly surprised to see two large rattlesnakes and several neonates (recently-born snakes) near the South Saskatchewan river in the general area of Leader.[3] (See back cover.) Predictably, as we approached, the snakes rattled their tails, uncoiled and began to disappear down into the den entrance. (Figure 2)

This is when Kattia began screaming "It has two heads!" and pointed at the ground. What Vanan and I had dismissed as two neonates basking together, uncoiled to reveal a single neonate with two heads. (Figure 1) To take a closer look we quickly pinned it to the ground with snake hooks, long straight pieces of metal with a curve at the end, used for handling venomous snakes from a safe distance. The neonate was only 26 cm long and dark with a somewhat obscured pattern, indicating it was about to shed its skin. It appeared similar in length to other neonates, but was slightly thicker throughout the body.

The two heads were joined just behind the base of the skull and each appeared to be fully functional: both

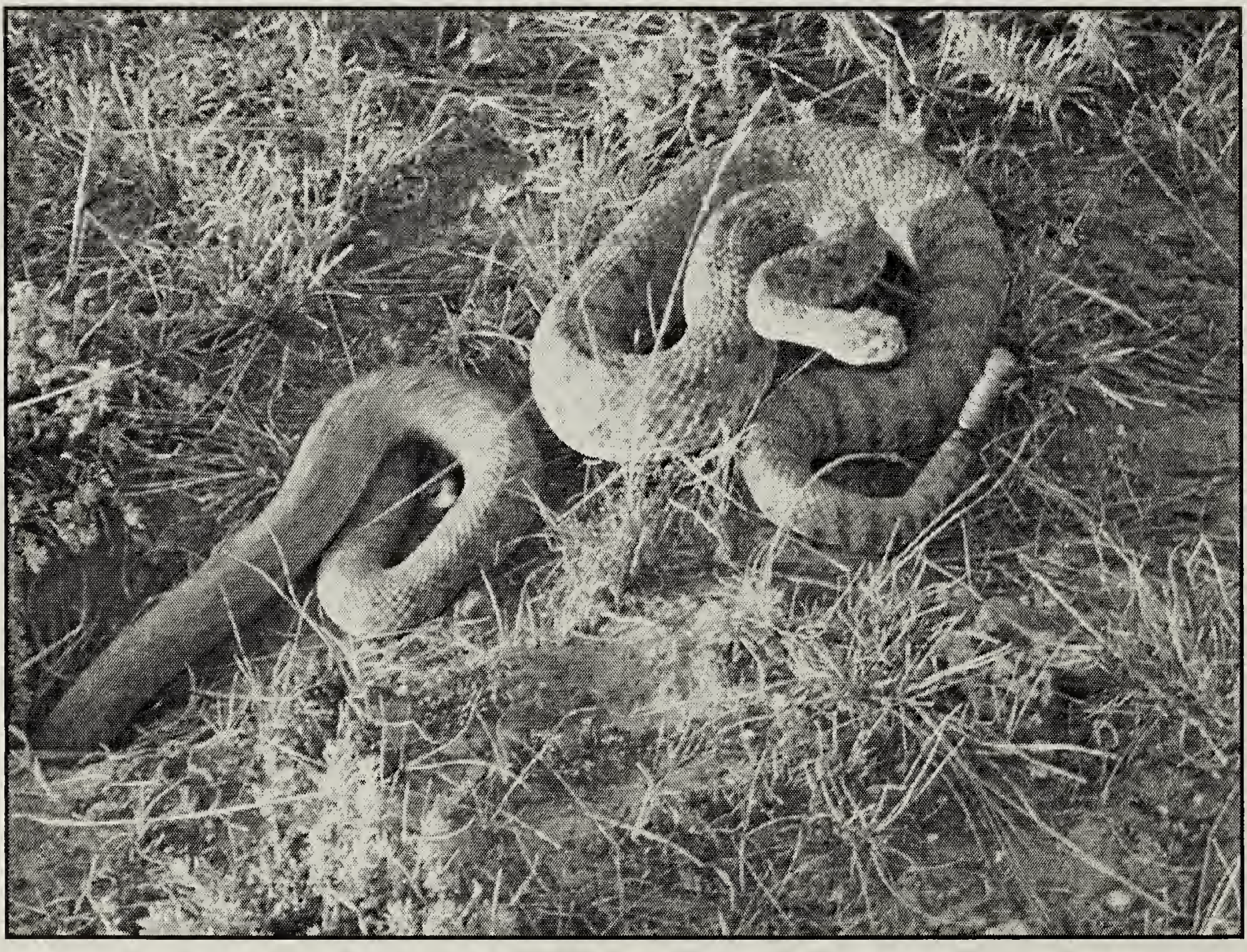

Figure 2. Adult prairie rattlesnakes disappearing into a den entrance when disturbed, October 2, 2004. *A. Reid*

sets of eyes appeared to focus, both tongues were flicking actively, and both mouths were certainly capable of biting. When the snake was released from the hook, the right-hand head seemed predominantly to control movement; the snake was generally coiled so that its right head faced us. The left head was still conscious, however, and the tongue flicked actively in our general direction. This snake was capable of coiling and tail rattling, but as it disappeared into the den it was noted to have an odd form of movement, a rather inching, side-winding sort of locomotion that seemed weaker than the fluid movement of other neonates observed earlier in the day.

The next day, we captured the two-headed neonate outside the same den and kept it in captivity until it died on approximately February 21st. I kept it in a 10 gallon glass terrarium on astroturf, with a shallow water dish and cardboard hidebox. The temperature was maintained between 26°C and 30°C. Food was offered in the form of domestic crickets (*Acheta domestica*) and newborn domestic mice (*Mus musculus domesticus*). While both heads tracked prey items and successfully envenomated, the right head was the most active in these hunting episodes. Successful attack of prey items indicated the snake was able to detect both odor and heat of the prey. However, the snake never consumed these prey items. The snake also exhibited a form of locomotion that was odd for a rattlesnake: it often moved sideways but exhibited small tremors that were especially noticable around the front of the body. When agitated, it did rattle its tail, producing a normal sound, and seemed to be able to target the source of danger, which was generally myself. It shed its skin twice. Each episode proceeded normally except it was unable to cast the skin without assistance in the form of warm water soaking and manually peeling the skin away, particularly around the heads. After each shed, a segment was added to the rattle. The snake steadfastly refused food, and became lethargic shortly before its death. I was away when it died and found it approximately five days after its death, so a certain amount of decay had taken place.

The snake was frozen until a necropsy could be performed. It had grown approximately 2.5 cm in length since capture. The radiograph (Figure 3) shows a grossly normal spine except where the two heads meet at an abnormally large vertebra, roughly hexagonal in shape. The left head had 6 vertebrae before the fusion while the right head had 8. Dissection revealed that the two esophagi fused just behind the joining of the two heads. The esophagus was normal between the point of fusion and the stomach. The intestine then separated again where it joined the stomach, but fused after approximately 2.5 cm. The rest of the intestine appeared normal. The two wind pipes (trachea) were separate; each head/neck had a separate respiratory and cardiovascular system. The left side generally seemed smaller and less developed. The heart on the left was smaller and carried little blood. The left lung and airsacs were also smaller. The right lung and airsac were well developed. We could not assess the functional capacities of these duplicated organs, but this situation is similar to that described in other accounts[11]. Other organs appeared normal in size and number for a juvenile snake. Lack of hemipenes indicated that the rattlesnake was female. Pathological findings indicate that the rattlesnake starved to death. It seems likely that the anatomical abnormalities, and the disruption of normal physiology they

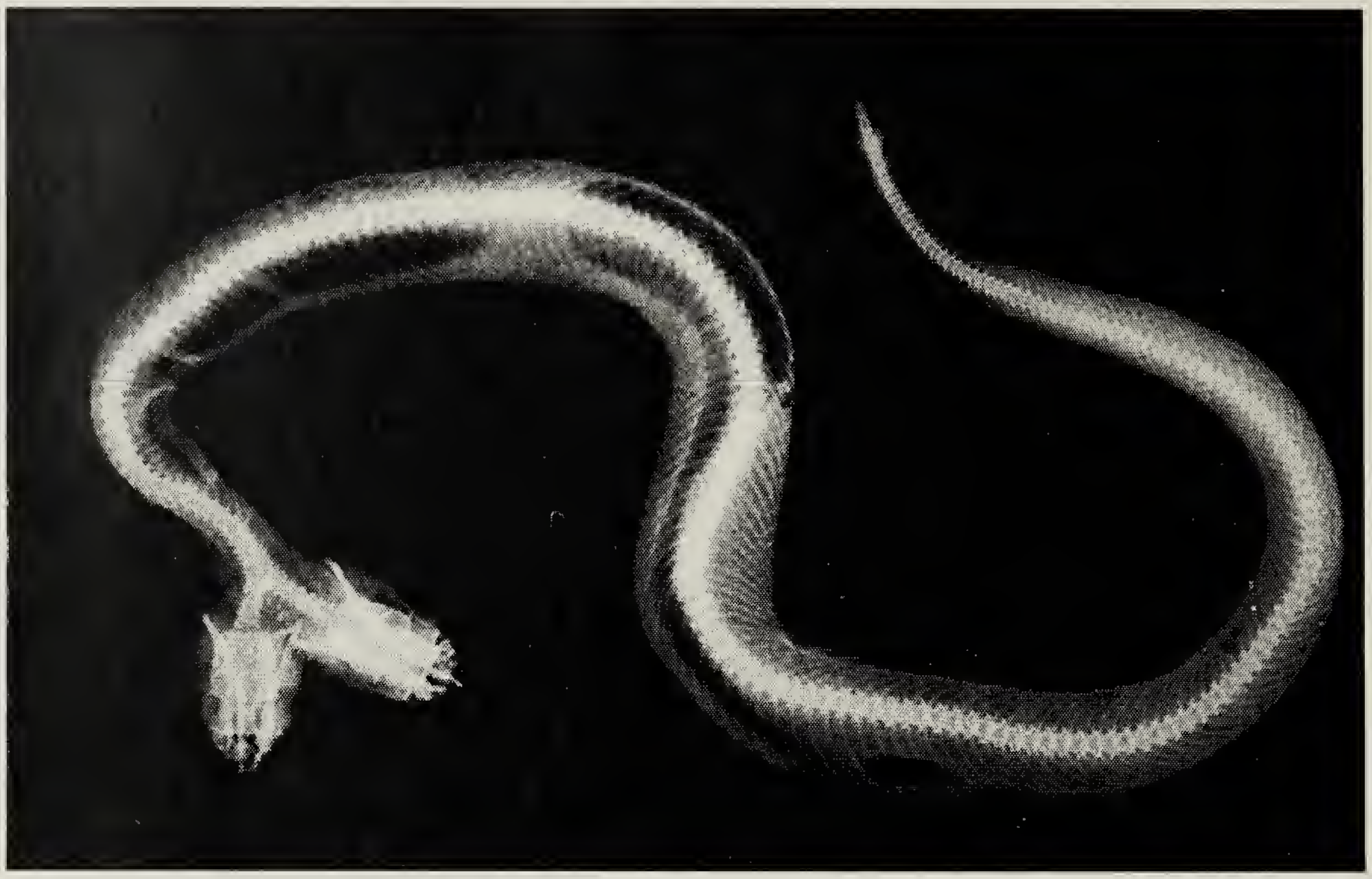

Figure 3. Radiograph of two-headed Prairie Rattlesnake *Ian Shirley*

would have caused, combined to prevent this snake from being able to eat.[4]

Bicephalism (two heads) does not seem to be an uncommon birth defect among snakes[7,11] Klauber described a bicephalic rattlesnake captured in Medicine Hat in 1949. This snake had two heads and necks that were divided for just over 7 cm before fusing into a common body; while both heads were aware and independent, the snake was unable to coil or move.[9] Lasher (1980) reports a bicephalic timber rattlesnake (*Crotalus horridus*) that was born in captivity to a female collected from Alabama; the litter consisted of fully developed young and three infertile eggs. The right head of the bicephalic individual was missing a left eye, and the connection between the heads was so close to the base of the skull the heads were deviated laterally. Lasher cites several other instances of bicephalism in rattlesnakes, most from former subspecies of *Crotalus viridis.* Mitchell and Fieg report a juvenile Northern Copperhead (*Agkistrodon contrortrix mokasen*) from Viginia, USA, that had a similar pattern of bicephalism with both heads joined at the neck just behind the base of the skull.[8] X-radiography showed that the left head was on the primary vertebral axis while the right one joined five vertebrae below the right skull. In addition to scientific reports, the popular media reports about one case of bicephalism in snakes a year. In fact, the same October, a 60 cm long bicephalic grass snake (species undefined) was reported in China,[1] and in 2002 a bicephalic Ladder Snake (*Rhinechis scalaris*) hatchling was recovered in Spain.[2]

Other congenital defects have been reported in rattlesnakes. Pendlebury gives an account of congenital defects in a litter of aborted fetuses from a female Prairie Rattlesnake captured near Empress, AB.[9] While none of the snakes exhibited bicephalism, skeletal and organ abnormalities relating to improper fusion or division of organs, as well as skeletal abnormalities, did occur in some of fetuses. Pendlebury attributed this to environmental conditions, particularly low temperature during gestation, as the female was not permitted to bask and a high temperature may be necessary for certain stages of embryonic development.[9]

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* * *

"As the moths around a taper,
As the bees around a rose,
As the gnats around a vapour,
So the spirits group and close
Round about a holy childhood, as if drinking its repose."

E. B. Browning, *A Child Asleep*, printed in *The Moth Book* by W. J. Holland, 1903 (reprinted 1968).

AN APPARENT DECLINE OF NORTHERN LEOPARD FROGS (*Rana pipiens*) ON THE RAFFERTY DAM MITIGATION LANDS NEAR ESTEVAN, SK

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Introduction

Northern Leopard Frogs (*Rana pipiens*) are found throughout much of North America in habitats associated with permanent streams, marshes, ponds and lakes.[9,14] They are large, green to brownish frogs with well-defined, pale-bordered spots on their backs. (Figure 1) Their call is often likened to someone running their finger across an inflated balloon and is accented with occasional chuckles and grunts. In Saskatchewan, they breed in May and early June, and the tadpoles usually metamorphose in late July and August. They attain sexual maturity at two to three years of age. Unlike Boreal Chorus Frogs (*Pseudacris maculata*, Figure 2) and Wood Frogs (*Rana sylvatica*, Figure 3), which over-winter under leaf-litter and snow, Northern Leopard Frogs over-winter at the bottom of water bodies deep enough to not freeze solid to the bottom. While the species may be familiar to many outdoor enthusiasts, the Northern Leopard Frog has met a far larger audience via its dubious honour of being the frog of choice for classroom dissections.

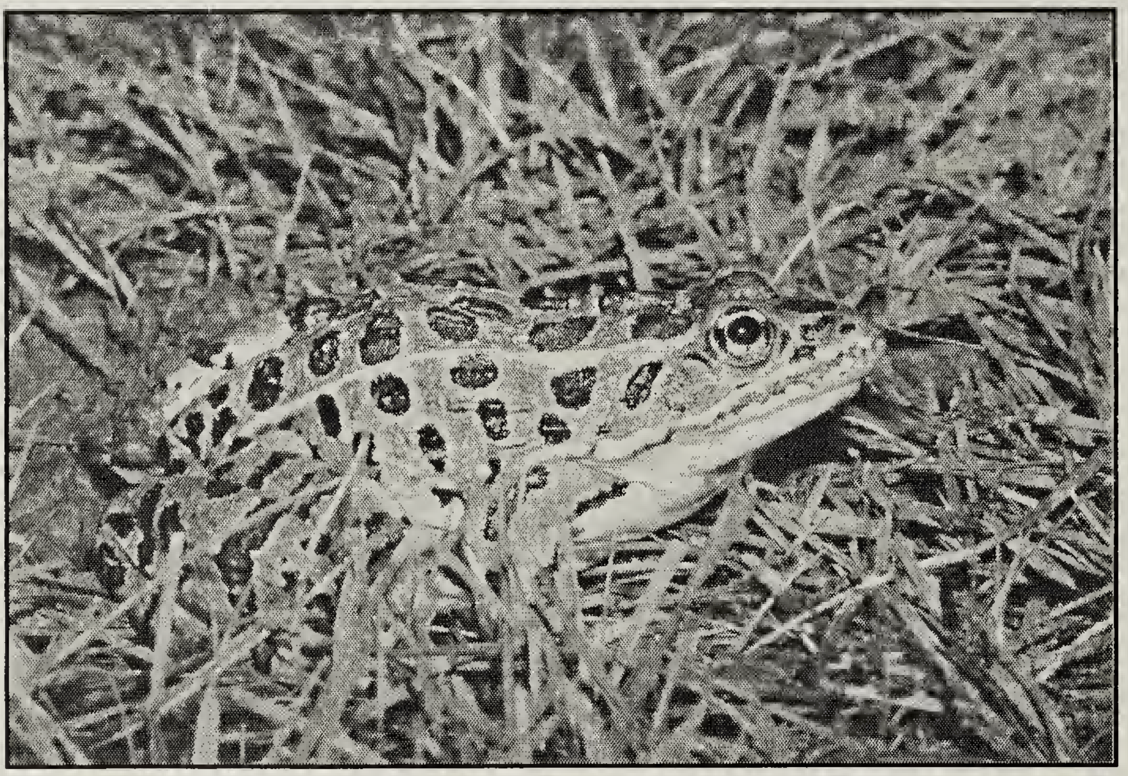

Figure 1. Northern Leopard Frog *R. E. Gehlert*

Like all amphibians, Northern Leopard Frogs are integral components of their ecosystems, serving as predator, prey and host. Northern Leopard Frog tadpoles eat

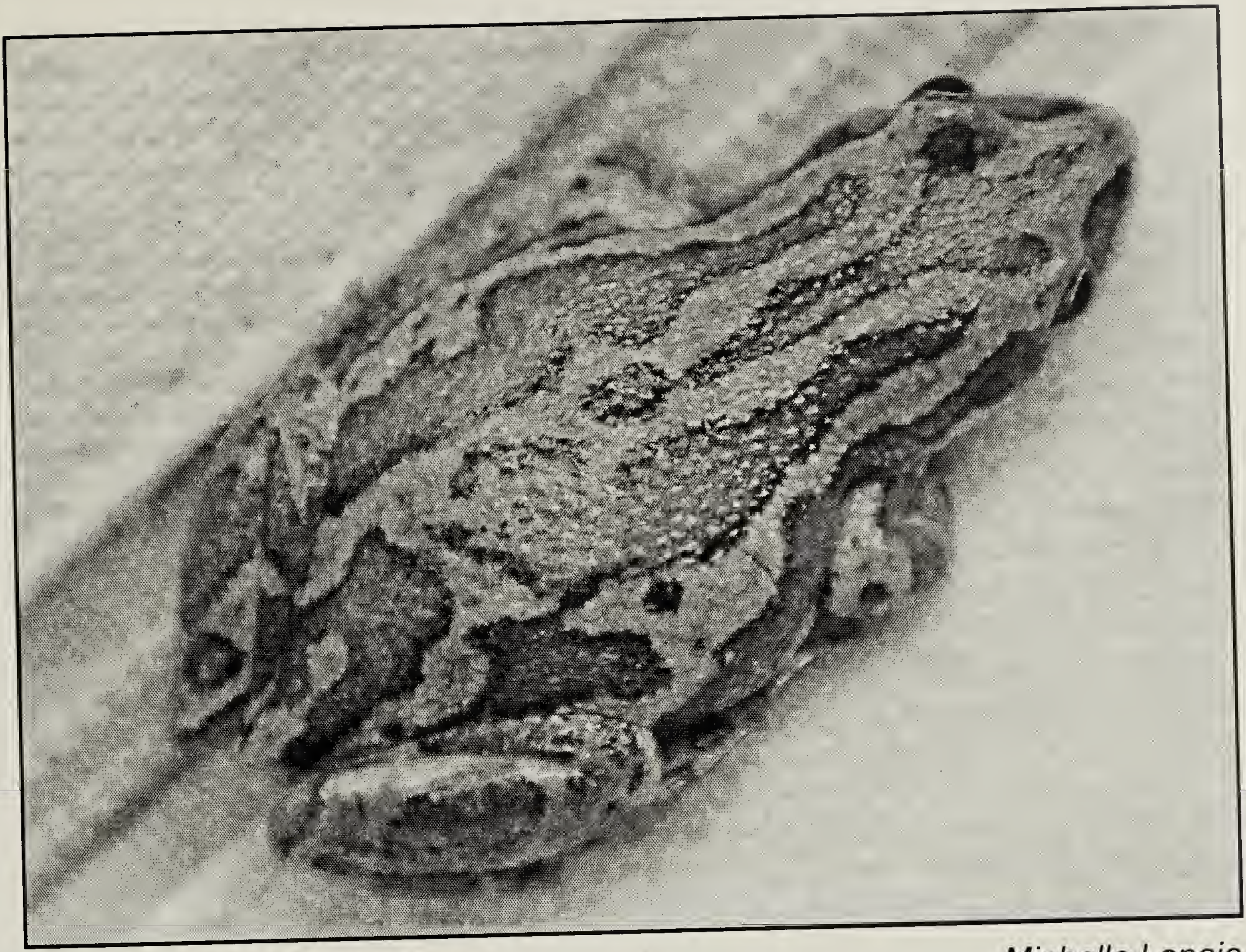

Figure 2. Boreal Chorus Frog

Michelle Lanoie

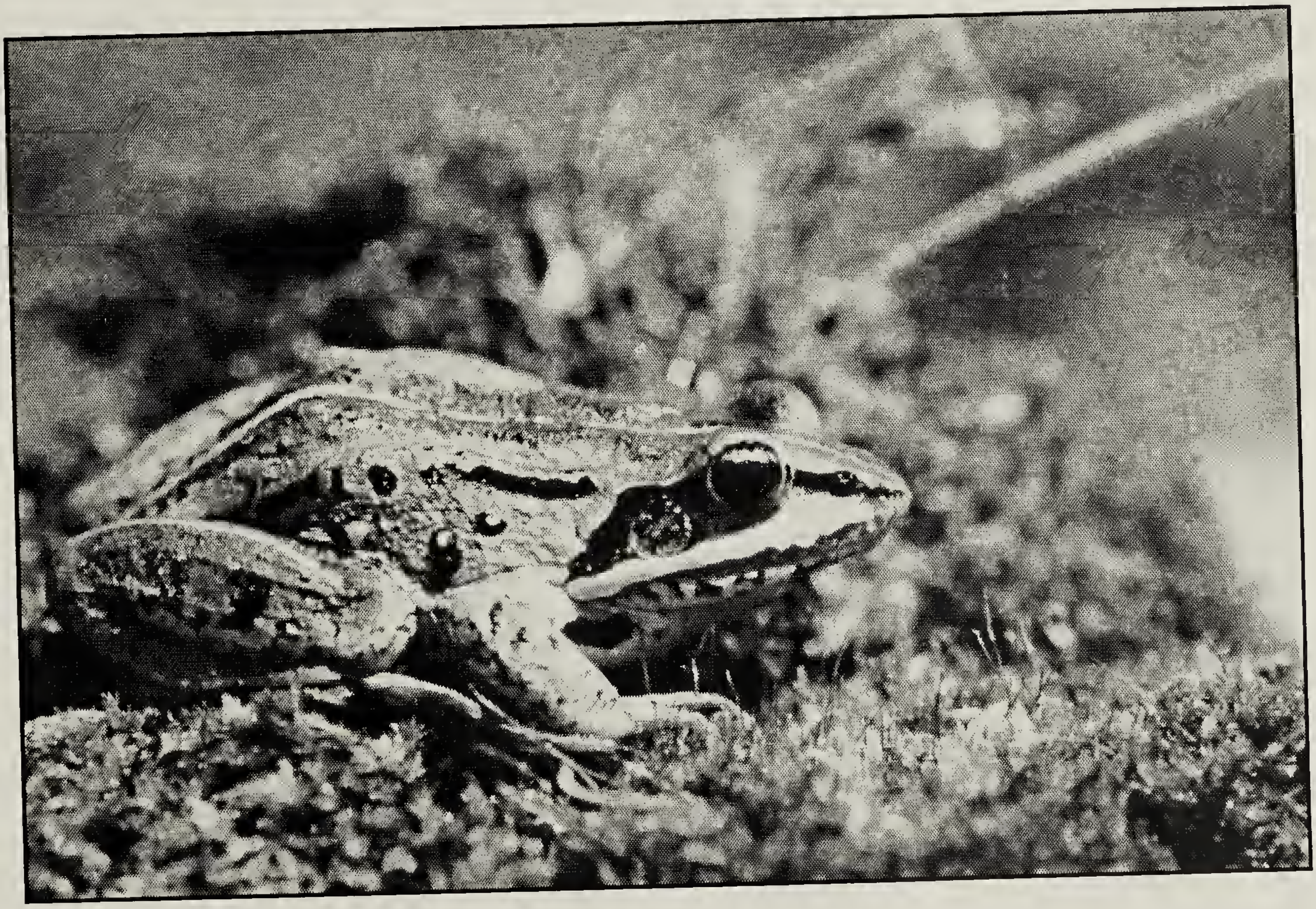

Figure 3. Wood Frog

R. E. Gehlert

mostly aquatic vegetation and algae and, in turn, are eaten by many organisms including fish, garter snakes (*Thamnophis sp*), herons, grebes, small mammals, and aquatic insects such as dragonfly larvae. During metamorphosis, their digestive tract undergoes a major transformation which accommodates their carnivorous post-metamorphic diet. After metamorphosis, Northern Leopard Frogs eat most manner of creatures small enough to swallow including insects, spiders, snails, small fish, and even other Northern Leopard Frogs. Many of the same reptile, bird and mammal species that prey on tadpoles also prey on the frogs.

Northern Leopard Frogs are intricately linked with another essential component of all ecosystems: parasites. One parasite of some notoriety is the trematode *Ribeiroia*, which has been connected with inducing certain kinds of limb deformities in amphibians.[10,16] Although *Ribeiroia* is not a new parasite, there is concern that its numbers are increasing in some parts of North America due to changes in wetlands that promote large populations of snails.[11] Large populations of snails may result in large populations of *Ribeiroia* because this parasite requires a snail host to complete part of its lifecycle. An increasing number of snails may mean an increasing number of *Ribeiroia* and consequently, an increasing number of frogs with limb deformities.

Unfortunately, Northern Leopard Frog numbers, like those of many amphibian species, have declined dramatically over much of their range in the recent past.[18] The geographic range of Northern Leopard Frogs contracted in the late 1970s and early 1980s. The cause(s) of the contraction has not been established but retrospective hypotheses include all the "usual suspects" associated with amphibian declines and other losses of biodiversity: land use change, global climate change, pathogen outbreaks, environmental contamination, over-collection from wild populations, and introduction of invasive species (e.g., predatory fish). Excellent reviews of these topics appear in Collins and Storfer, Green, and Semlitsch.[6,9,17] Although amphibians are notorious for their highly variable year-to-year recruitment[1] (the addition of sexually mature individuals to a population through birth and survival to sexual maturity), persistent downward population trends for extended periods of time have made it clear that Northern Leopard Frogs are decreasing in numbers across much of their historic range.

In 2002, the Committee on the Status of Endangered Wildlife In Canada (COSEWIC) classified the Northern Leopard Frog as a species of "Special Concern" in the prairie provinces because the "species remains widespread but has experienced a severe contraction of range and loss of populations, particularly in the west. This has been accompanied by increased isolation of remaining populations, which fluctuate widely in size."[7] In Saskatchewan, Northern Leopard Frogs are ranked as "S3 - rare to uncommon" by the Saskatchewan Conservation Data Centre (Saskatchewan Environment).[15]

Here we report an apparent Northern Leopard Frog population decline in southeastern Saskatchewan on the Rafferty Mitigation Lands (RMLs). The RMLs, along with the Alameda Mitigation Lands, were acquired by the Province of Saskatchewan in the late

1980s to offset loss of wildlife habitat due to flooding from the Rafferty and Alameda dams on the Souris River and Moose Mountain Creek, respectively.[12] A total of approximately 4000 discontinuous hectares were acquired, the majority of which were cultivated at the time of purchase. Ongoing management objectives include converting the land to more structurally and biologically diverse habitat (e.g. grasslands, wetlands, tree stands) in the hopes of creating appropriate wildlife habitat. The RMLs consist of three parcels of land, each named after the nearest town: Macoun, Midale and Halbrite. Our report concerns only the Macoun and Halbrite parcels because the Midale parcel is small and does not include appropriate Northern Leopard Frog habitat.

Methods

The Macoun and Halbrite parcels were first visited in May of 1999 by D.M. Schock while conducting wildlife surveys for Saskatchewan Wetland Conservation Corporation (now part of the Saskatchewan Watershed Authority). In addition to incidental amphibian sightings recorded during bird and aquatic invertebrate surveys, a formal amphibian survey was conducted as part of the 1999 wildlife survey.[12] Site visits from 2000-2004 were conducted as time permitted but special efforts were made to visit the RMLs in mid-May each year because Northern Leopard Frogs are active and vocal at this time of year, and because large numbers of Northern Leopard Frog carcasses were found at the Macoun site in mid-May 1999 and 2000.

By 2002, it was apparent that there were far fewer Northern Leopard Frogs on the RMLs than there had been in 1999 and 2000, prompting us to collect Northern Leopard Frog data from other locations to use as “reference sites”. The reference sites allowed us to determine whether Northern Leopard Frog numbers also were low at other sites that historically had populations of Northern Leopard Frogs. Reference sites were locations known to have Northern Leopard Frogs in the previous one to two years and to have habitat characteristics comparable to the RMLs. They were located in areas that facilitated visiting them during the course of other activities, thereby improving the frequency with which we could visit the sites. Three reference sites were chosen: Grasslands National Park - West Block, Saskatchewan Landing Provincial Park, and Eagle Creek (northwest of Saskatoon). Like visits to the RMLs after 1999, visits to reference sites were made during recreational outings or in conjunction with unrelated research projects. Although visits to the reference sites were made as time permitted, special efforts were made to visit at least one reference site within a few days of visiting the RMLs.

Most site visits involved walking the perimeter of the water body and looking, listening, and dip-netting for amphibians during daylight hours, May-August. In 2003 and 2004, some sites were also seined (10m wide x 2m deep nets pulled through the water with ropes) as part of a research project on Tiger Salamanders (*Ambystoma tigrinum*). To prevent spreading pathogens and other organisms among sites, nets and boots were cleaned of large material and then disinfected with a 10% bleach solution. Aseptic collection and handling techniques were employed when dealing with live or dead animals.

To improve our basis for comparison, we also acquired Northern Leopard Frog reports submitted to the Saskatchewan Conservation Data Centre

Table 1. Northern Leopard Frogs encountered per visit to the Macoun and Halbrite parcels of the Rafferty Mitigation Lands 1999-2004, and three reference sites 2001-2004.

		Macoun (RML)				**Halbrite (RML)**	
		East Draw	*Yellowhead Alley*	*Wetland dock ~ boat launch*	*Westend Dugout*	*Old Farm Dugout*	*Turtle Ponds*
		N49 10.58 W103 12.43	N49 12.15 W103 10.97	N49 12.01 W103 12.43	N49 12.18 W103 15.28	N49 24.38 W103 33.46	N49 23.65 W103 34.47
1999	18 May - 8 June	100's - 1000's live adults & small subadults; 100+ carcasses*[3]*	10+ calling	1 seen*[2]*	--	10+ calling	10+ calling*[3]*
1999	11-23 June	~40 small subadults seen; all apparently healthy	10+ seen	3 large tadpoles seen	26 total seen (subadults & adults)*[2]*	0	100+ tadpoles seen*[2]*
1999	7-17 July	--	50+ recent metas seen	10+ recent metas seen	10+ recent metas seen	10+ recent metas seen	10+ recent metas & 100+ tadpoles seen
2000	21 May	1000+ alive; 100+ carcasses - mostly small subadults, a few large adults	--	8 live + 2 dead adults	--	--	--
2001	5-23 May	0*[2]*	0*[2]*	5-10 calling*[2]*	--	--	--
2002	13-22 May	0*[2]*	0*[2]*	0*[2]*	--	--	--
2002	3-5 June	0	0	0	--	--	0
2002	12 July	0	0	0	--	--	2 seen
2003	12-26 May	0*[2]*	1-5 calling	1 adult seen	--	--	0
2003	11-18 July	2 adults seen	0	0	--	3 adults seen	0
2003	26-28 Aug	1 adult & 6 recent metas seen	0	0	2 adults & 8 recent metas seen	1 adult & 2 recent metas seen	5 recent metas seen
2004	16 May	1 calling	0	--	--	0	1 adult seen
2004	13-29 July	0	--	0	1 adult seen; no tadpoles despite seining*[2]*	0 - none despite seining	1 adult seen

• Site visits entailed walking+dipnetting along edge unless otherwise noted. • "--" denotes site not visited during time interval. • "metas" = recent metamorphs. i.e. young-of-the-year frog life stage, not tadpoles. • "+" denotes that at least that many individuals were encountered.

Table 1. Continued

		Grasslands National Park (West Block)				**SK Landing Prov. Park**	**Eagle Creek**
		3/4 Pond	*Old Gergovia*	*Greenblob*	*Belza*		
		N49 10.07 W107 25.88	N49 10.81 W107 24.96	N49 11.15 W107 25.46	N49 09.14 W107 31.58	N50 38.81 W107 57.78	N52 12.04 W107 23.45
1999	18 May - 8 June	--	--	--	--	--	--
1999	11-23 June	--	--	--	--	--	--
1999	7-17 July	--	--	--	--	--	--
2000	21 May	--	--	--	--	--	--
2001	5-23 May	--	--	--	--	--	9+ adults seen
2002	13-22 May	--	--	--	--	--	3 dead adults, 1+ calling*[2]*
2002	3-5 June	--	--	--	--	--	30+ seen*[2]*
2002	12 July	--	--	--	--	--	12 adults & 1+ tadpoles seen
2003	12-26 May	2 adults seen*[3]*	6 adults & 10+ tadpoles seen*[2]*	2 adults seen	3+ adults seen*[2]*	--	--
2003	11-18 July	0	--	2 adults & 20-50 recent metas seen	--	20-100 total seen: adults, recent metas & large tadpoles	--
2003	26-28 Aug	--	--	--	--	--	20+ recent metas seen
2004	16 May	--	--	--	--	--	--
2004	13-29 July	1+ adults & 10-100 tadpoles seen	100+ tadpoles seen*[2]*	--	100+ tadpoles & recent metas seen	20-100 total seen: adults, recent metas & large tadpoles	15 adults & 100+ recent metas seen

- *[2], [3]* = # of times site visited during time interval if more than once. Visits at least 2 days apart. If site was visited more than once during an interval, the highest number of individuals encountered in a single visit is reported. • Pond names were coined by DMS for convenience and do not necessarily correspond to any other names.

(Saskatchewan Environment) 2001-2004.

We would like to highlight that our report does not cover the entire range of Northern Leopard Frogs in Saskatchewan and we do not report on the numerous sites we visited over the years where we did not find Northern Leopard Frogs despite apparently suitable habitat.

Results

The numbers of Northern Leopard Frogs encountered on the RMLs dropped steeply after 2000, despite increased surveillance effort (Table 1). Only two individuals were found in 2002 despite four visits to the RMLs in that year and no tadpoles were found in 2004 despite seining ponds where Northern Leopard Frogs had previously been found.

In sharp contrast to the RMLs, Northern Leopard Frog numbers at the three reference sites were not low in 2002-2004 (Table 1). Incidental sightings at other locations and reports obtained from the Saskatchewan Conservation Data Centre (Table 2) also suggest that Northern Leopard Frogs were found elsewhere in southern Saskatchewan, including in the Estevan area. Even the Weyburn Golf Course was blessed with 100's of Northern Leopard Frogs in 2003.[2]

Large die-offs on the RMLs in 1999 and 2000 probably contributed to the low numbers of Northern Leopard Frogs on the RMLs in 2001-2004. On the very first visit to the Macoun parcel of land, 18 May 1999, hundreds of dead Northern Leopard Frogs were found (Table 1). A second, larger die-off was encountered in May of 2000. The numbers of dead frogs in 1999 and 2000 easily reached into the 100's within 300m stretches of shoreline.

In 1999 and 2000, a total of approximately 65 dead or lethargic frogs were collected and necropsied. The examinations revealed that many had lesions consistent with lethal viral infections. Details of pathology and virus characterization will be published elsewhere but briefly, the virus was confirmed to be a novel strain of Frog Virus 3 (FV3), a ranavirus. Ranaviruses (Family Iridoviridae) are a large genus of globally distributed viruses. Members of this genus can cause mass mortality events in fish, amphibian, and reptile species, although infections are not always lethal nor do they always cause overt signs of disease.[3,5,8] A pathogen outbreak, such as a ranavirus outbreak, would have been encouraged by high numbers of frogs in the late 1990s. We know there were high numbers of Northern Leopard Frogs in 1999 and 2000 based on the large numbers of carcasses and we assume there were high numbers in 1998 because the 100's of carcasses found in the spring of 1999 were animals at least one year old.

Northern Pike (*Esox lucius*) and Western Painted Turtle (*Chrysemys picta*) carcasses also were found at least once every year from 1999 to 2004 on the Macoun parcel, particularly at the "East Draw". Unfortunately, these carcasses were too decomposed to confidently identify a cause of death, or were too far out in the water to be collected. We never encountered more than three dead turtles or pike during a given site visit so we do not know whether the carcasses were part of larger mortality events. However, we feel it is important to note that the turtle and pike carcasses were found in the

Table 2. Other sightings of Northern Leopard Frogs in Saskatchewan 2000-2003.

Nearest town or permanent location	Site name	Land location/ coordinates	Date of visit	Number observed [1]	Source of record [3]
Ceylon	Ceylon 2	N49.35; W104.77	20-Jul-01	~70	a
Ceylon	Ceylon 3	N49.56; W104.61	24-Jul-01	abundant[2]	a
Craik / Elbow	Elbow PFRA pasture	N51 04; W106 19	20-Aug-00	7	d
Cypress Hills Inter-prov. Park	Belanger Creek Area	NE-29-08-26-03	15-Jul-00	100+ in Belanger Creek area	c
Esterhazy	Esterhazy 14	N50.59; W102.10	15-Aug-01	<40	a
Esterhazy	Esterhazy 3	N50.75; W101.94	30-Jul-03	abundant[2]	b
Estevan	Estevan Rec2	N49.08; W103.08	19-Jul-01	<40	a
Estevan	Estevan OMP6	N49.10; W102.80	19-Jul-01	<40	a
Estevan	Estevan Nat6, 14	N49.16; W102.86	19-Jul-01	100+	a
Estevan	Estevan OMP7	N49.06; W102.88	20-Jul-01	<40	a
Kipling	Kipling 2	N50.15; W102.14	30-Jul-03	abundant[2]	b
Mortlach	Mortlach 3	N50.31; W106.07	8-Aug-01	abundant[2]	a
Mortlach	Mortlach 1	N50.33; W106.07	8-Aug-01	<40	a
Radville	Radville 18	N40.31; W104.29	27-Jul-01	abundant[2]	a
Radville	Radville 12	N49.41; W104.31	27-Jul-01	abundant[2]	a
Radville	Radville 1	N49.39; W104.34	25-Jul-03	<40	b
Radville	Radville 10	N49.29; W104.23	25-Jul-03	<40	b
Radville	Radville 3	N49.30; W104.30	25-Jul-03	abundant[2]	b
Radville	Radville 7	N49.49; W104.29	25-Jul-03	<40	b
Regina	Johnson Pond	~15km NW of Regina	21-Aug-01	20+	d
Smeaton	Smeaton 2	N53.86; W104.62	12-Aug-03	<40	b
Stoughton	Stoughton 4	N49.83; W102.89	1-Aug-01	abundant[2]	a
Stoughton	Stoughton 1	N49.67; W102.95	29-Jul-03	<40	b
Weyburn	Weyburn 7	N49.26; W104.01	26-Jul-01	<40	a
Weyburn	Weyburn 10	N49.29; W104.61	26-Jul-01	<40	a
Weyburn	Weyburn 6	N49.30; W103.98	26-Jul-03	<40	b

• [1] Number observed includes all life stages except eggs. • [2] Assumed by original source to be mostly young-of-the-year recent metamorphs. • [3] Sources: a = SK CDC: Stet Donald, D. Forsyth; b =SK CDC: D. Forsyth; c = J. Pepper; d = D.M. Schock.

same locations as the Northern Leopard Frog die-offs.

Discussion

Northern Leopard Frogs, like most other amphibians, have highly variable recruitment from year to year, due in part to their ability to forego breeding in poor years (e.g., during droughts). Accordingly, wide fluctuations in numbers are to be expected, including years when few animals are encountered.[1] Our data suggest, however, that the low number of Northern Leopard Frogs at the RMLs in 2002-2004 was not a widespread or even regional phenomenon, and therefore not readily attributable to weather patterns such as drought or cool temperatures. We feel that the massive die-offs in 1999 and 2000 contributed to the low numbers 2001-2004. One cause of the die-offs was a ranavirus outbreak, but we may never know the complex of ecological mechanisms that precipitated the die-offs in 1999 and 2000.

Northern Leopard Frogs exist in metapopulations, clusters of populations loosely connected to each other through migration in exceptional years.[1] Recovery of the RMLs population may rely on migrants from other populations recolonizing the area. Unfortunately, recolonization events may be rare for species living in highly fragmented habitats, such as the prairies, because tracts of land between suitable habitat patches may be inhospitable and therefore impossible to traverse. The result is isolated populations in areas that cannot be recolonized when something “goes wrong” such as when a pond dries or a pathogen gets the upper hand.

We hope that what we have reported here is just a low point in one population’s cycle and that the frogs will recover in the next few years. We also hope that this note will encourage others to take interest in the amphibians they encounter. The Canadian Amphibian and Reptile Conservation Network (CARCNet) website[4] provides a great introduction to “herping” and contains excellent information on habitat, geographic distribution, and identification (including frog calls). Enthusiastic readers are encouraged to report their amphibian sightings to their provincial/territorial governments (e.g., Saskatchewan Environment Conservation Data Centre), provincial museums, or to FrogWatch, a member of the NatureWatch volunteer monitoring program.[13] Volunteer-based programs like FrogWatch do not require large time commitments from participants and the data collected can shed much-needed light on population stability and health, especially when the data are used in conjunction with data from long-term monitoring programs. However, the nature of these volunteer programs makes them inappropriate stand-ins or substitutes for rigorous systematic surveys and monitoring programs conducted by government agencies. Therefore, we end our report with a plea for provincial and federal authorities in Saskatchewan to undertake rigorous surveys and implement long-term monitoring programs for Northern Leopard Frogs, a species that is floundering throughout most of western North America. Without such efforts, it is not possible to make informed predictions about the long-term stability of Northern Leopard Frogs in Saskatchewan, nor is it possible to evaluate how population declines like the one we report here factor into those predictions.

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Wood Frog blending in with aquatic vegetation *Shelley Kaplar*

NOTES AND LETTERS

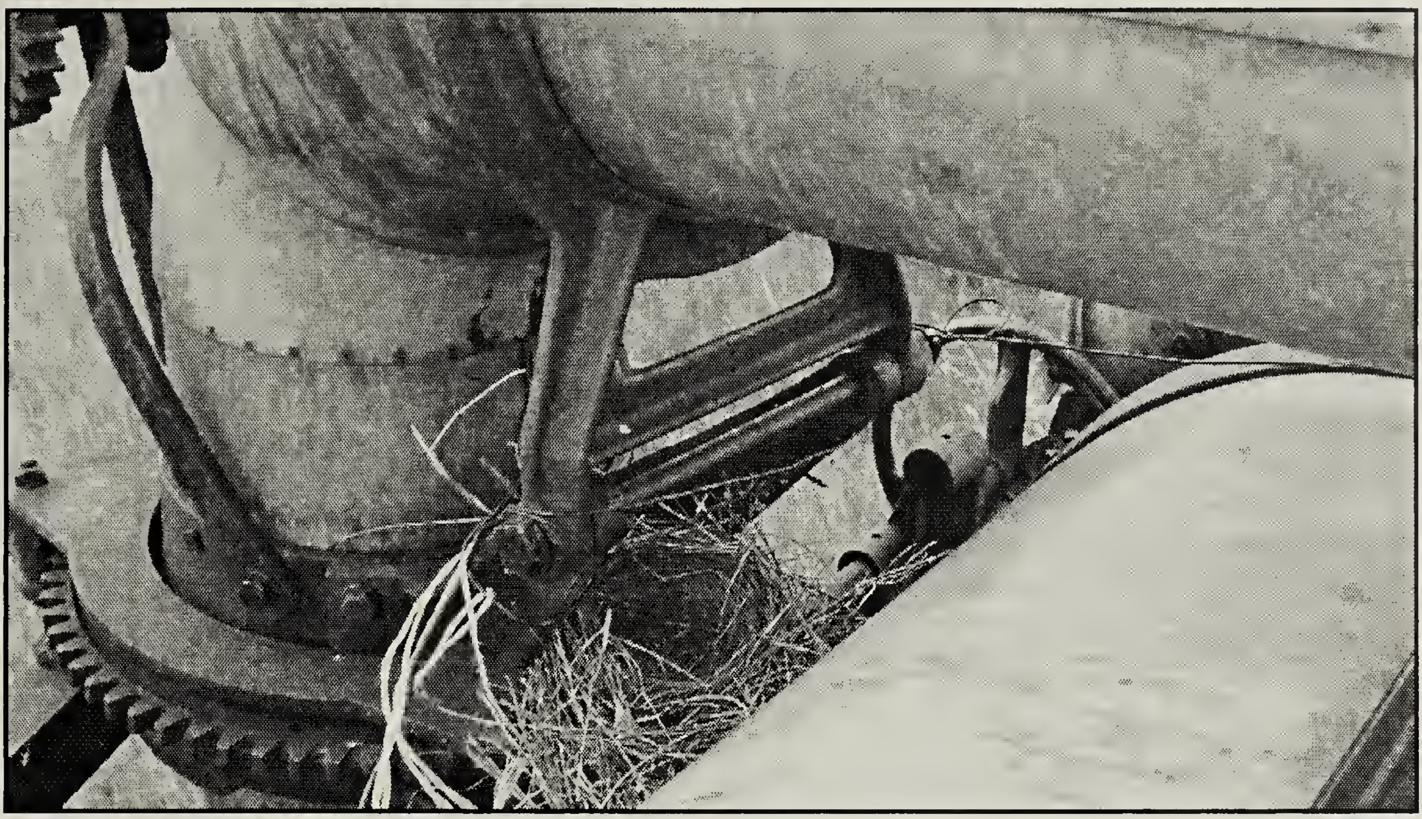


Figure 1. Loggerhead Shrike nest in grain binder, August 2005 *Kylie McRae*

A LOGGERHEAD SHRIKE NEST IN A RUSTING GRAIN BINDER

On June 11, 2005, a Loggerhead Shrike nest in a rusting antique grain binder was observed by a group of people from the Nature Saskatchewan Spring Meet touring the Butala homestead at Old Man on His Back Prairie and Heritage Conservation Area, about a one hour drive southwest of Eastend, SK. (Figures 1 and 2) The nest contained five recent hatchlings. There were no suitable shrubs nearby for nesting. The adult Loggerhead Shrikes, however, did have plenty insect prey and barbed wire fencing for impaling and storing their prey. It was fascinating to watch them forage and lead us away from their nest. I am wondering how common it is for Loggerhead Shrikes and other songbirds to use disused machinery as nest sites.

Acknowledgements

I wish to thank Peter Butala, Bob MacFarlane and the Nature Conservancy of Canada staff for a wonderful tour.

- *Robert Warnock,* 3603 White Bay, Regina, SK S4S 7C9 , E-mail: <warnockr@accesscomm.ca>

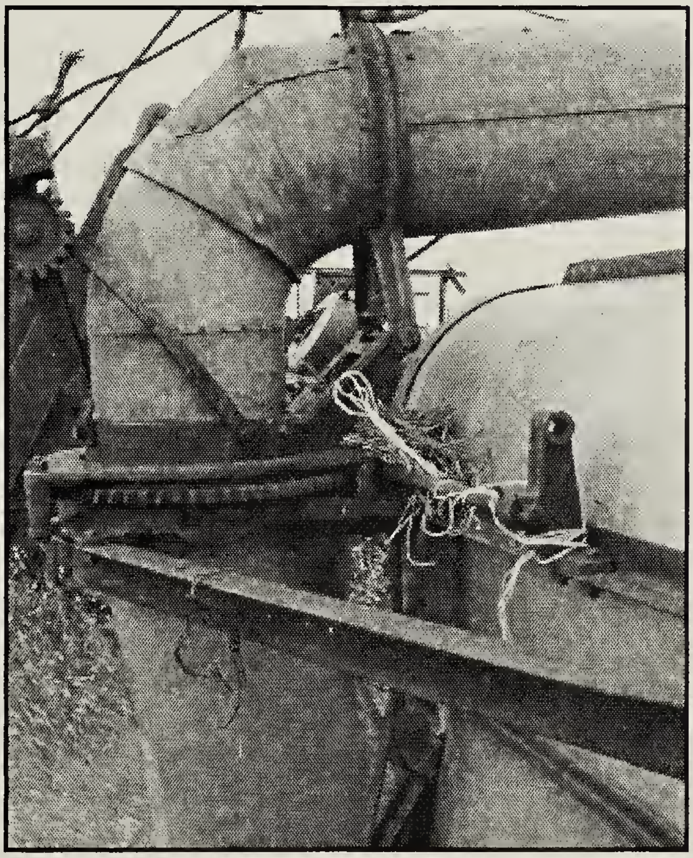


Figure 2. Location of Loggerhead Shrike nest in grain binder, August 2005 *Kylie McRae*

Loggerhead Shrike in a Caragana hedgerow south of Consul, SK on June 1, 2002 *Guillermo Perez*

* * *

JUVENILE NORTHERN GOSHAWKS AT GOOD SPIRIT LAKE, SK

This summer our yard was invaded by two juvenile Northern Goshawks. On Friday, August 19, Joyce watched the two standing in and drinking from, a small bird bath on the ground only 12 metres from the kitchen window. Our bird baths are a story in themselves. Of the eight scattered around the yard only one is “store-bought” and it is the least popular. The hawks were in the most popular one–a discarded cast iron oven door from an old wood-burning cookstove.

The young hawks showed little fear of us so we viewed them in all positions with and without binoculars. They were brown with heavily streaked underparts, speckled on the back and had a visible but not distinct supercillium–love those technical terms–I would call it a stripe over the eye. The size was larger than a Cooper’s. The begging call, which goes on endlessly, was a long plaintive screech. The only observation of an adult was one flushed immediately when I came around the corner on our road. All I saw was a blue-grey hawk. The juvenile sat there until I drove within five meters of it. Normal breeding habitat for this species is the boreal forest. We live on the south side of Good Spirit Lake, 59 km NNW of Yorkton and about 100 km south of the boreal forest. The juveniles were flying well. Would they have migrated or did the species nest locally in undisturbed woods consisting of Aspen and Balsam Poplar forest? A previous nest in the Bredenbury district in 1992 was verified by Stuart Houston.[1]

1. HOUSTON, C. S. and W. ANAKA. 2003. Birds of Yorkton-Duck Mountain. Saskatchewan Natural History Society, Regina.

- *Bill & Joyce Anaka*, 301 - 57 Russell Drive, Yorkton, SK S3N 4B6

ISABEL PRIESTLY'S LEGACY

I've always enjoyed reading the Notes and Letters section containing natural history anecdotes from around the province. However, in looking back over the decades, it's apparent that there are now far fewer submissions from rural and junior naturalists, and it seems that the Blue Jay is becoming more of a scientific journal than a natural history journal. I wonder whether this is due to changing demographics and urbanization, or whether it's an inevitable trend toward scientific reporting and the domain of specialists. At any rate, we appear to be diverging from Isabel Priestly's vision of the Blue Jay, as stated in Volume 4 (1) (Oct. Nov. Dec. 1945) : " We have always tried to present material in the 'Blue Jay' in an informal manner, just as if two or three nature lovers had got together and were exchanging experiences. At the same time we have always tried to present facts which are scientifically correct."

I'd like to encourage this policy by sharing three observations from my summer sojourn back to the prairies:

1. **June 24, 2005**. Rocky Mountain House to Luseland, Saskatchewan along the 52nd parallel. Nearly calm. Large numbers of butterflies flying north over the highways, throughout the width of Alberta and into Saskatchewan. Many "road kills". At home, in Luseland, the garden is alive with these butterflies, and my mother, Mrs. Valerie Finley, says that she has never seen anything like it. She thought they were Painted Ladies and had heard on the radio that the invasion was a widespread phenomenon, originating from somewhere far to the south.

2. **June 29, 2005**. Luseland. The long drought is over and the country is green as Ireland. Discover nest of Lark Sparrows with three young in old robin nest in Blue Spruce in our front yard, and a Merlin nest with two young in our backyard. This is the first breeding record of the Lark Sparrow for the area, and the first time that Merlins have nested in town for many years. In the subsequent week, I found four other pairs of Lark Sparrows on territories within the town, one of which was using an abandoned robin nest (from which it later fledged four young). Thus it seems that 2005 (and the end of a drought ?) coincided with a northern expansion of the Lark Sparrow. I'm curious whether other naturalists in the province witnessed this invasion. Are Lark Sparrows capable of building their own nests?

3. **July 10, 2005**. Luseland. I'm surprised to realize that the European Starling, an invasive species that was once very common, is now rather scarce. And though I've noticed it for several years, it is evident that the once-common Common Grackle, has all but vanished. I haven't seen a single bird in town. Why, I wonder, and have other rural naturalists noticed similar trends?

Species invasions and declines are interesting phenomena, particularly noticeable to observant naturalists / hunters / farmers / ranchers etc. who have resided in a locality for some time. It's politically correct now to refer to this body of knowledge, gained through long experience on the land, as "Traditional Ecological Knowledge" buts it's plain old natural history when recorded "in the 'Blue Jay' in an informal manner, just as if two or three nature lovers had got together and were exchanging experiences." I'd strongly encourage local naturalists to submit their observations to the *Blue Jay* for posterity sake, and to keep Isabel Priestly's legacy alive.

- *James K. Finley*, 10232 Summerset Place, Sidney, BC V8L 4X2

POETRY

DEATH OF A MONARCH

It lay spread upon
the shorn dry August lawn
wings trembling slightly
so that I knew it was alive
but what a difference from
the agile flier we'd seen earlier
or was this a different one?
Only after I carefully lifted it
up upon my hand
did I realize it was injured
missing one pair of legs
abdomen a bit askew
but still I wanted it to fly
so held it aloft in bright sunlight
letting you admire its fine color.
When I moved it upward
its fragile wings slowly tilted
but it wouldn't, it couldn't, fly.
We left it clinging to a shrub
where it stayed overnight...
still alive the next day
it could flutter but not fly...
a sad grounded monarch.
I thought later to bring it indoors
but when I went back out
it had disappeared, somewhere
disheveled, lost, left.

- Bob Nero

GEESE LANDING

Totally transfixed, the dog and I,
at the sight of the first fall flock
of Canada geese in early August
twenty, no thirty-plus silent birds
elegant, familiar great forms
turning and dropping down
legs dangling, braced to land
joining a small group of geese
quietly foraging just yards ahead of us
on the mowed grass at the ballfield.

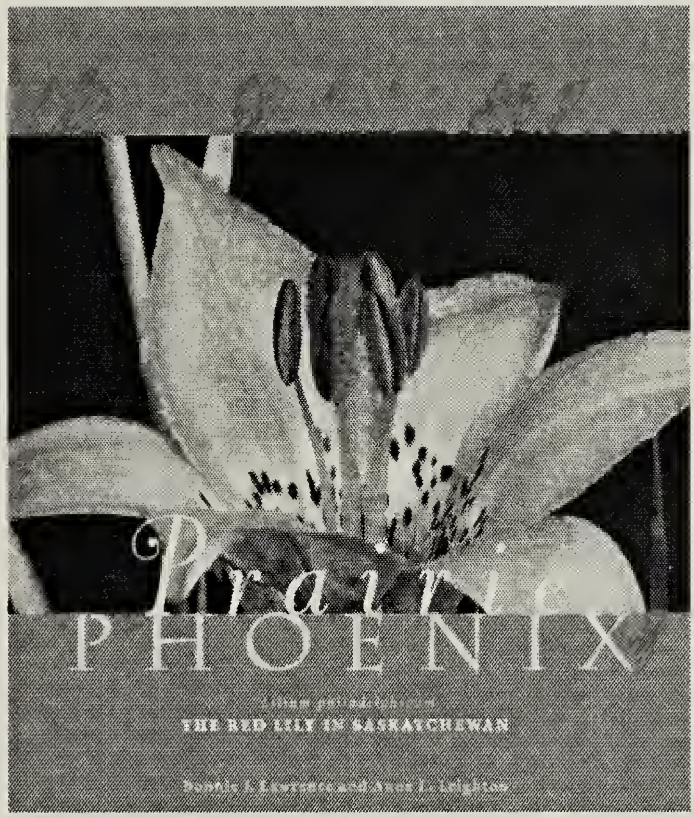
This is what wings are for, I thought,
thrilled, excited by the varied positionings
cupped wings embracing the cool, damp air
a highly controlled falling
a group maneuvering of immense quietude
as they neatly, adroitly landed.

- Bob Nero

NATURE LIBRARY

PRAIRIE PHOENIX: THE RED LILY, *Lilium philadelphicum*, IN SASKATCHEWAN

Bonnie J. Lawrence and Anna L. Leighton. 2005. Nature Saskatchewan Special Publication No. 25. 139 pp. 24.95 Can. Softcover 21.5 x 25.3 cm, (8.5 x 10 inches).


Prairie
PHOENIX
Lilium philadelphicum
THE RED LILY IN SASKATCHEWAN
Bonnie J. Lawrence and Anna L. Leighton

At first glance, the large format and plethora of photographs in this book lead one to believe that it might be what is commonly referred to as a "coffee table" book, the kind that you can flip through idly as you converse with friends or watch the TV news. But those books favor titillating the visual sense over providing an educational experience and this book definitely does not fit that category. Skimming through the table of contents is enough to convince you that you are in for a treat, a magical mixture of myth, fiction and scientific facts presented with a writing style that in places reads like poetry.

As the culmination of more than a decade of direct study and the accumulation of in excess of a century of anecdotal and scientific literature, the book is an ecological treatise. It takes the reader from details of anatomical structure through phases of growth, and provides information on range, habitats, associated species and interactions with other components of the lily's ecosystem. It is a treat to learn not only about the hidden secrets of the lily's life history, but also about the habits of the animal life with which it shares space, both underneath the ground and above it.

The photographs, illustrations and figures throughout the book are superb, with the names of many of our well-known naturalists represented in the photo credits, supporting and enhancing the excellent material obtained by the authors. Is it any wonder that we can never tire of seeking out the lilies every summer just to absorb a little of their beauty into our own souls?

Even in this day of computer spelling and grammatical checks it is unusual to find a book as free of errors as this one. I noticed no spelling errors and in only a few places did I find the wording awkward or wonder if another word might have been more fitting. I chuckled over the description of a township's fabric as containing rectangles "1 mile wide and 2 miles high" as definitely being the mind set of a map user rather than someone visualizing the survey on the ground where wide and high have quite definitely different meanings. The quality of the text in this book speaks to the care and dedication of the authors. To produce a book that has so little of which anyone can be critical is a worthy achievement and this one is a true work of art.

The large format of the book does not lend itself to bedtime reading, and the arthritic might prefer a smaller page to the white space in the book, but the page size does allow one to see in greater clarity the detail of the images. I thought at first the alternate color of the text was being used to pick out quotes, but that does not follow through the whole book so perhaps it was meant only to draw attention to certain passages. I puzzle over the inference that the protection clause of the legislation was only added with the 1981 Act, for I recall an overwhelming sense of guilt that I was breaking a law when trying to salvage lilies from the ditches of a road allowance being upgraded in the mid-1960s. I see as an avenue of research for someone interested in genetics the observation that "Something to look for on hillsides frequented by butterflies is a greater range of flower colour variation as a result of extensive cross-pollination by these insects." It would seem the authors are not in favor of the legislation presented on page 130 in that, on page 135, the inference is that only the landowner's permission is required when collecting seeds which is in fact picking a part of the plant, a contravention of the Act. Those who collect and grow the seeds for sale as a business are engaged in the carrying out of their occupation, but private individuals who collect for their own gardens are in contravention of the Act.

I found only two errors in the book, and two others were pointed out to me. On page 131 the scientific name for Thorny Buffaloberry is given as *Shepherdia canadensis* when it should be *Shepherdia argentea*. Similarly, Chokecherry is not *Prunus pensylvanica* (Pincherry) but *Prunus virginiana*. The suffix on the species name for Little Bluestem should match the genus name as *Andropogon scoparius,* formerly, and as *Schizachyrium scoparium*, the currently accepted name. On page 132 the kirigami illustrated instruction step 3 states fold AC over to AB which is not quite correct and better expressed in the step 3, found in the text above.

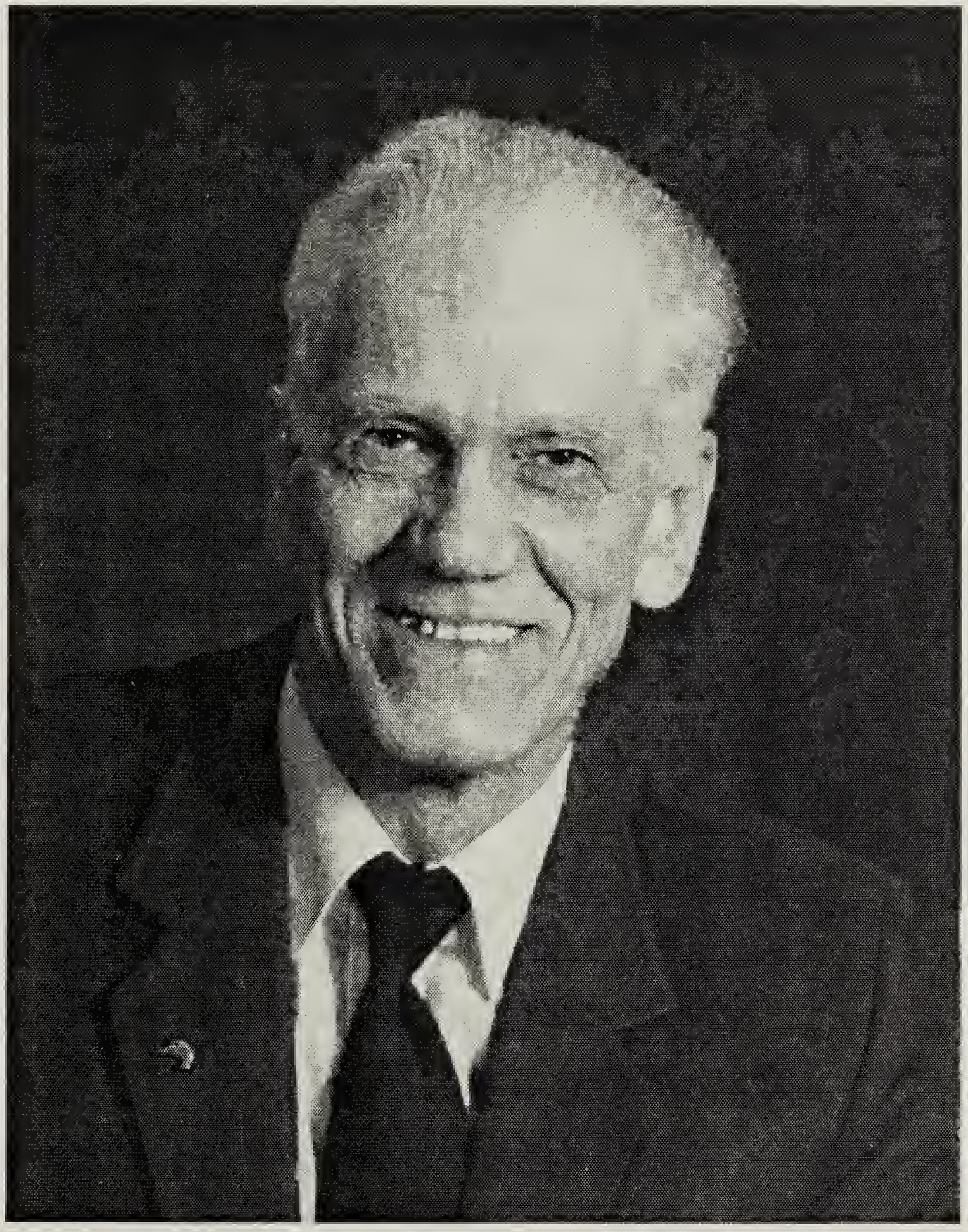
Published in the year of the Saskatchewan Centennial in 2005, this book is a fitting tribute to the provincial floral emblem. We must take up the challenge of its final pages to ensure that this lily continues to thrive in natural habitats throughout its range and that its apparent expansion into boreal areas does not follow the pattern of the Greater Prairie Chicken, which expanded its range with settlement into Saskatchewan, but is now extirpated here.

Reviewed by S. M. Lamont, Box 550, Raymore, SK S0A 3J0

IN MEMORIAM

HERBERT CHARLES MOULDING, 1922-2005

C. STUART HOUSTON, 863 University Drive, Saskatoon, SK S7N 0J8



Herb Moulding was born in Hartney, Manitoba on June 29, 1922. His family moved to a dairy farm near Broadview, Saskatchewan when he was an infant. He learned responsibility early. At age six, he rose at 6 a.m., milked six cows, then took them half a mile to pasture and went on another half mile to school. The reverse pattern was followed later in the day. His spending money derived from gopher tails, for which the municipality paid a one-cent bounty. No wonder that in adulthood he never once took a day of sick leave.

Herb worked his way through University, earning 25 cents an hour as section crew on the Canadian Pacific Railroad, and for two summers, $65 a month as a farm foreman. He obtained his diploma in Agriculture from the University of Saskatchewan in 1942. His thesis was on the effects of irrigation and alkali on agricultural lands.

In April 1943, he travelled by train to Brooks, Alberta, to begin his lifetime employment with Ducks Unlimited (DU). He began by building dams with a four-horse team. Each winter, however, he attended engineering classes and obtained his Bachelor of Engineering (Civil Engineering) degree from the University of Saskatchewan in 1947. During the winter of 1948-1949, he took courses in water management and wildlife administration at Fort Collins University in Colorado.

In 1950, Herb moved to Regina, where he was joined by Ritta, a nurse he'd met at the Grande Prairie, Alberta hospital, who became his wife of 35 years (she died in 1985). They had four children, Lynda, Gail, Patrice and Allan. During his first summer working for DU in Regina, he carried out 128 engineering reconnaissances of possible future waterfowl impoundments. In 1951, he became Saskatchewan Manager of DU, a position he held until 1973. As manager, he was responsible for hiring Saskatchewan's first two DU biologists, Bob Caldwell and Tom Sterling.

During the dry years of the 1930s and 1940s, the Saskatchewan government established a Conservation and Development (C&D) Branch within the Department of Agriculture, initially to conserve and develop water resources, but in the extremely wet years of 1954 and 1956, the focus of C&D turned mainly to drainage. As a result, many important wetlands disappeared. Herb applauded the formation of a Wetlands Stabilization Board by the Deputy Minister of Natural Resources, with representation of the Wildlife Branch and of Agriculture and Water Rights. For the first time, modest consideration was given to wildlife needs. Herb assisted this Board by interpreting aerial photographs, and by taking profiles of lake depths which he did drilling holes in the ice while travelling in a propeller-driven iceboat. On Janzen Lake, he also reported on rain and snowfall, and the vegetation and slope of the surrounding land, in order to calculate the expected annual water runoff.

In 1961, Herb devised a wetland classification system, assisted with waterfowl crop depredation research, produced a brief for the new Qu'Appelle Basin Study Board, and influenced the decision to have wildlife's need for water legislated into the Water Rights Act.

As chair of the Regina Waterfowl Committee, which presented a brief to the Wascana Centre Planning Committee in the spring of 1961, Herb argued for the need to preserve the natural marsh on the southeastern outskirts of Regina. In appreciation of his forward-looking plan, most of which was implemented, the SNHS presented Herb with its Conservation Award that year. In 1963, Herb, Margaret Belcher and Bob Nero each received an Award of Merit from the American Association for Conservation Information.

Herb was president of the Regina Natural History Society, 1963-64, vice-president of the Saskatchewan Natural History Society (SNHS), 1964-65, and president from 1965 to 1967. He then chaired the Regina Waterfowl Park committee from 1967 until he was transferred to Winnipeg in 1973. He also represented the SNHS on the Qu'Appelle Valley Development Association. While in Saskatchewan, he served as a director of the River Development Association, the Saskatchewan Resources Development Association, the Water Studies Institute, and as secretary for the Canadian Society for Civil Engineering, Prairie Region. When Herb left Saskatchewan, DU presented him with the "Super-Shoveler Award" "so he may always be prepared to shovel."

Within DU, he helped transplant Canada Geese into southeastern Saskatchewan and adjacent Manitoba, areas where they were then rare. He directed projects to manage bulrush, which included burning and mowing, or transplanting into water bodies with insufficient vegetation. In addition, spike rush seeds were harvested by combine and sago pondweed was moved in quantity to provide habitat and food for ducks.

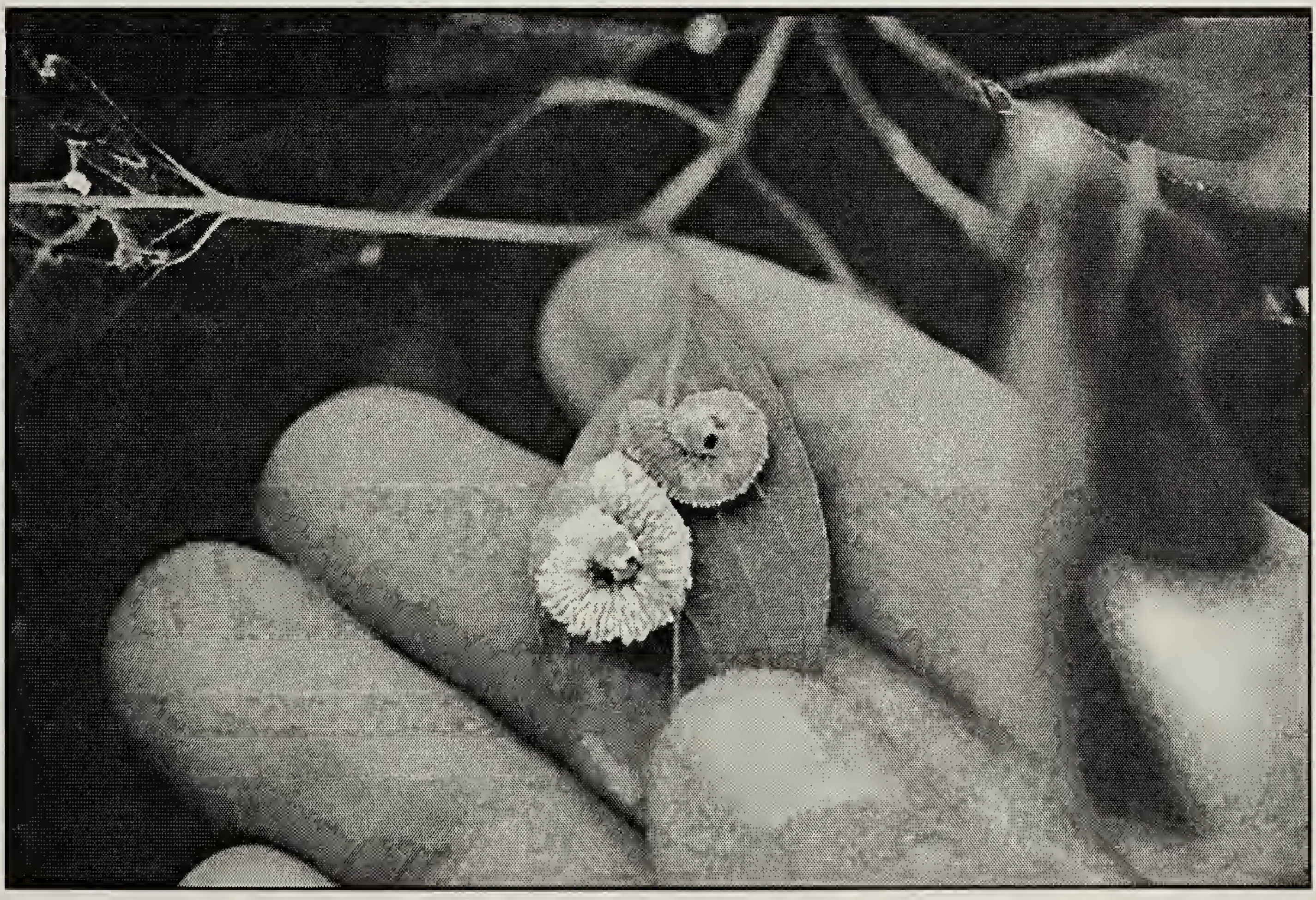
Herb retired from DU in 1986 and moved to British Columbia, but in April 2005 he returned to live in Saskatoon, where he died on July 24, 2005. Few engineers in any organization have made so many contributions to the environment as Herb did through his work with both government agencies and non-governmental organizations.

* * *

MYSTERY PHOTO

SEPTEMBER 2005 MYSTERY PHOTO

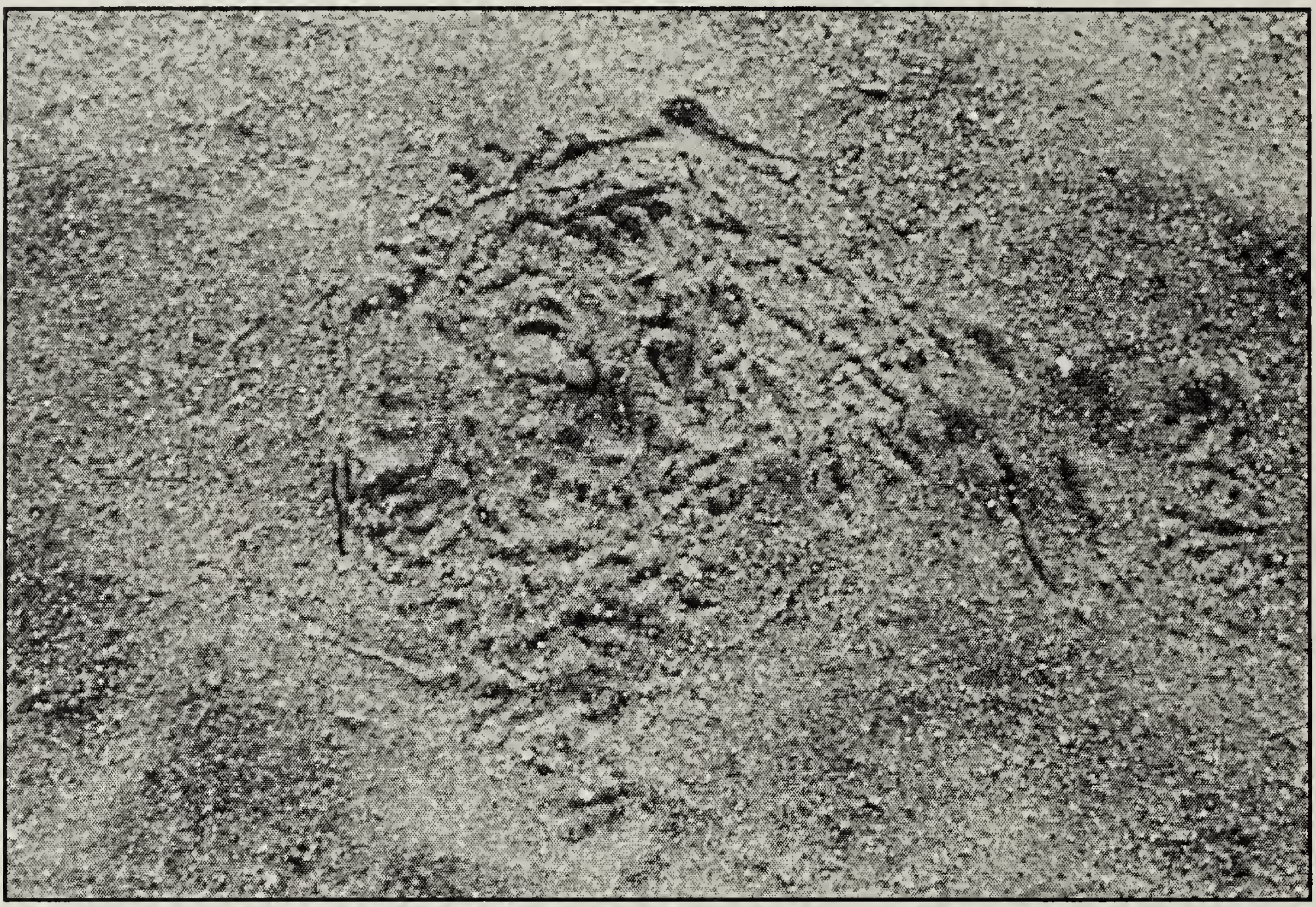
What are these powdery white coils on leaves of Red Osier Dogwood? (Photograph taken in Maine on August 17, 2002.)

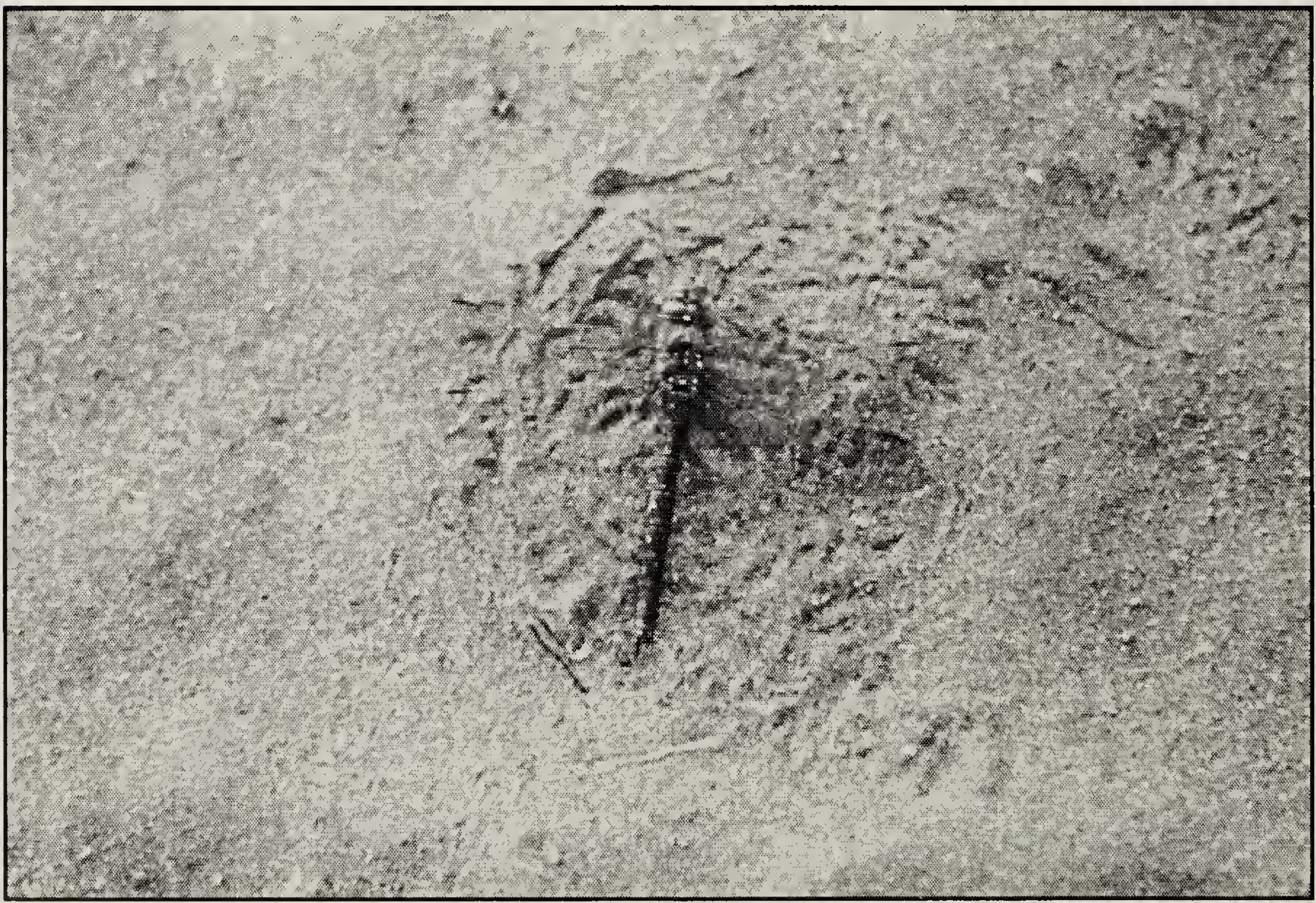


NAME OF THE BIRD PICTURED ON PAGE 118: Lark Sparrow

ANSWER TO THE JUNE 2005 MYSTERY PHOTO

Photographs by Bernie Gollop.





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